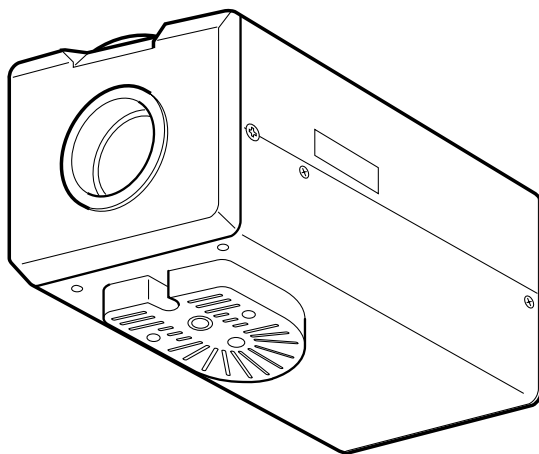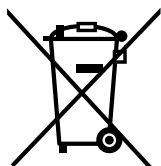# JVC

IP CAMERA

VN-V25U

INSTRUCTIONS

Thank you for purchasing this JVC product. Before operating this unit, please read the instructions carefully to ensure the best possible performance.

Safety Precautions

Information for Users on Disposal of Old Equipment
[European Union]

This symbol indicates that the electrical and electronic equipment should not be disposed as general household waste at its end-of-life. Instead, the product should be handed over to the applicable collection point for the recycling of electrical and electronic equipment for proper treatment, recovery and recycling in accordance with your national legislation.

By disposing of this product correctly, you will help to conserve natural resources and will help prevent potential negative effects on the environment and human health which could otherwise be caused by inappropriate waste handling of this product. For more information about collection point and recycling of this product, please contact your local municipal office, your household waste disposal service or the shop where you purchased the product.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

(Business users)

If you wish to dispose of this product, please visit our web page www.jvc-europe.com to obtain information about the take-back of the product.

[Other Countries outside the European Union]

If you wish to dispose of this product, please do so in accordance with applicable national legislation or other rules in your country for the treatment of old electrical and electronic equipment.

Attention:
This symbol is only valid in the European Union.

FOR USA AND CANADA

⚡	**CAUTION**	!
	RISK OF ELECTRIC SHOCK DO NOT OPEN	

CAUTION:TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE.REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash wish arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Information for USA

This device complies with part 15 of the FCC Rules. Changes or modifications not approved by JVC could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1)This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSETHIS APPLIANCE TO RAIN OR MOISTURE.

AVERTISSEMENT:
POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTRO-CUTION, NE PAS EXPOSER L'APPAREIL A L'HUMIDITE OU A LA PLUIE.

INFORMATION (FOR CANADA)
RENSEIGNEMENT (POUR CANADA)

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil num rique de la Class A est conforme á la norme NMB-003 du Canada.

WARNING (FOR EUROPE):
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

- This installation should be made by a qualified service person and should conform to all local codes.
- This installation shall be in accordance with the National Electrical Code, ANSI/NFPA 70.
- The unit is to be powered by an AC 24 V power supply.
  The AC 24 V power supply should conform to the following:Class 2 only(For USA),Isolated power supply only(For Europe and other).
- Any Mention in this manual of Alarm inputs/outputs have not been evaluated by UL to be used for Burglar Alarm Functionality.

This manual describes detailed usage of VN-V25U.
For basic usage of VN-V25U, please refer to "Start-up Guide".
For latest information, please refer to "Readme" file in the CD-ROM.
- The supplied CD-ROM includes "Instructions (this manual)"(pdf), "API Guide"(pdf) and "Search tool".

FOR USA-California Only
This product contains a CR Coin Cell Lithium Battery which contains Perchlorate Material - special handling may apply.
See
www.dtsc.ca.gov/hazardouswaste/perchlorate

ENGLISH

Dear Customer,

This apparatus is in conformance with the valid European directives and standards regarding electromagnetic compatibility and electrical safety.

European representative of Victor Company of Japan, Limited is:
JVC Technology Centre Europe GmbH
Company name changed in:
JVC Technical Services Europe GmbH
Postfach 10 05 52
61145 Friedberg
Germany

DEUTSCH

Sehr geehrter Kunde, sehr geehrte Kundin,

dieses Gerät stimmt mit den gültigen europäischen Richtlinien und Normen bezüglich elektromagnetischer Verträglichkeit und elektrischer Sicherheit überein.

Die europäische Vertretung für die Victor Company of Japan, Limited ist:
JVC Technology Centre Europe GmbH
Firmenname geändert in:
JVC Technical Services Europe GmbH
Postfach 10 05 52
61145 Friedberg
Deutschland

Getting Started

These are general IMPORTANT SAFEGUARDS and certain items may not apply to all appliances.

IMPORTANT SAFEGUARDS

1. Read all of these instructions.
2. Save these instructions for later use.
3. All warnings on the product and in the operating instructions should be adhered to.
4. Unplug this appliance system from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
5. Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.
6. Do not use this appliance near water - for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
7. Do not place this appliance on an unstable cart, stand, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance.

    PORTABLE CART WARNING
    (symbol provided by RETAC)

    Use only with a cart or stand recommended by the manufacturer, or sold with the appliance. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer. An appliance and cart combination should be moved with care.

    Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

    S3125A

8. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the appliance and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the appliance on a bed, sofa, rug, or other similar surface.

    This appliance should never be placed near or over a radiator or heat register. This appliance should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
9. This appliance should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company. For appliance designed to operate from battery power, refer to the operating instructions.
10. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
11. Do not allow anything to rest on the power cord. Do not locate this appliance where the cord will be abused by persons walking on it.
12. Follow all warnings and instructions marked on the appliance.
13. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
14. Never push objects of any kind into this appliance through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the appliance.
15. Do not attempt to service this appliance yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
16. Unplug this appliance from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    a. When the power cord or plug is damaged or frayed.
    b. If liquid has been spilled into the appliance.
    c. If the appliance has been exposed to rain or water.
    d. If the appliance does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to normal operation.
    e. If the appliance has been dropped or the cabinet has been damaged.
    f. When the appliance exhibits a distinct change in performance - this indicates a need for service.
17. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
18. Upon completion of any service or repairs to this appliance, ask the service technician to perform routine safety checks to determine that the appliance is in safe operating condition.

Contents

Main Features

■ High Picture Quality
The camera unit of this product employs a 330,000-pixel CCD (1/4") which enables high quality video surveillance.

■ Support for Dual Stream
Simultaneous distribution of JPEG and MPEG4 images is possible.

■ Realization of Full Frame Rate
Data transmission is possible in VGA size at a rate of 30 fps.

■ Support for Multicast
This product supports multicast, which enables transmission of image data to multiple computers on the network without lowering the frame rate.

■ Built-in Web Server
You can configure the picture quality and communication settings using the Internet Explorer.

■ HTTP-based API
This product comes with HTTP-based API. This feature enables you to perform setting and control via the network.

■ Electronic Sense Up
You can shoot images during surveillance at a dark place by lengthening the exposure time to enhance the camera's sensitivity level.

■ Night Surveillance
This product comes with a low luminance feature (Easy Day Night), which switches automatically to the high sensitivity mode (black-and-white).

■ Privacy Mask
You can configure the privacy mask setting to hide specific area in shooting area.

■ Motion Detection
This feature enables output of an alarm upon detection of motion in the video image within preset area.
Pre-/Post-recorded image files may be sent via FTP using the alarm input.

■ Support for PoE (Power over Ethernet)
This product supports PoE (IEEE802.3af class 2) and enables power supply from a LAN cable.

■ Built-in JPEG and MPEG4 Viewer
Monitoring of JPEG and MPEG4 images via a computer is possible by downloading the built-in viewer onto the computer.

■ Analog Monitor Signal Output (For Installation)
This product comes with an analog video monitor signal output terminal for adjusting the camera angle during installation.

■ Compatibility with Conventional Peripheral Devices
This product comes in the same shape as conventional CCTV security cameras, and therefore can be used with other peripheral devices for security cameras such as housings.

How to use this manual

■ Symbols used

Caution : Describes precautions concerning the operation of this product.

Note : Describes reference information, such as functions and usage restrictions of this product.

☞ : Indicates the reference page numbers and reference items.

■ Content of this manual
- All rights reserved by JVC. Unauthorized duplication or reprinting of this manual, in whole or in part, is strictly prohibited.
- Windows is a registered trademark of Microsoft Corporation in the U.S.
- All other product names used in this manual are trademarks or registered trademarks of their respective companies. Marks such as ™, ® and © have been omitted in this manual.
- Illustrated designs, specifications and other contents of this manual are subject to changes for improvement without prior notice.

Operating Environment

■ Recommended Computer Specifications

OS : Windows XP (Professional or Home Edition) (SP2)

CPU : Pentium4 1.5 GHz or higher

Memory capacity
: 1 GB or more

Free hard disk space
: 512 MB or more

Display and video card
: 1024 × 768 pixels or higher, True Color (24 or 32 bits) VRAM 8 MB or more (256 MB and above recommended)

Web browser : Internet Explorer Version 6.0

■ LAN Environment
● 10BASE-T/100BASE-TX network interconnected using devices such as an IEEE802.3-compliant switching hub.
● IEEE802.3af-compliant switching hub when PoE is in use.
● IGMPv2-compliant network when multicast is in use.

Note:
● The above PC specifications are guides for smooth use of the applications, and not a guarantee of their operation.
● Depending on the condition of use, applications may not run smoothly even when the user's computer meets the specification requirements.
● Using a computer for which its performance does not meet the requirements may cause the JPEG playback frame rate to deteriorate. In addition, it also causes delay in the MPEG4 playback images, and may result in interruption in playback.
● To make use of the built-in MPEG4 Viewer of VN-V25U, install "ffdshow" that is open source codec. You can download "ffdshow" from the Internet.

Cautionary Notes

Maintenance and location of use

● This product is intended for use indoors. Make sure that you use a housing when using it outdoors.

● Do not place this product in the following environments.

Otherwise, it may malfunction or break down.
● Hot or cold locations beyond the surrounding temperature range of -10°C to 50°C.
● Locations beyond the allowable operating humidity range of 20 % to 85 %. (condensation is not allowed)
● Near equipment that emits strong magnetic fields, such as transformers or motors.
● Near equipment that emits radio waves, such as transceivers and mobile phones.
● Locations with excessive dust or sand.
● Locations that are subject to excessive vibration.
● Locations prone to moisture such as window side.
● Locations subject to steam or oil, such as kitchens.
● Locations that emit radiation, X-rays or corrosive gases.

● Use of this product or cables connected to this product at locations where strong electric waves and magnetic fields are emitted (e.g., near radio, TV, transformer, monitor, etc.) may cause noise interferences in the images or changes in the color.

● Do not install this product at locations that may trap heat.

This product also discharges heat from the surface of the camera unit. As such, do not install it at locations that may trap heat, such as near walls.

Handling Precautions

● Do not hang on this product, shake it, or hand objects over it. Applying an excessive load may cause the product to fall off and result in accidents.

● Do not stack up the equipment.

Heat or noise of an equipment may cause malfunction or failure of the other, and result in fire.

● Do not block vents around the equipment.

Inadequate heat ventilation may result in malfunction of this product. Be sure not to block vents around the product.

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Saving Energy

● When this product is not in use for a long period of time, turn off the power of the system to ensure safety and reduce power consumption.

Maintenance

● Be sure to turn off the power before performing maintenance.

● Wipe this product using a soft cloth.

Wiping with thinner or benzene may melt or tarnish its surface. For dirt that cannot be easily removed, wipe using a neutral detergent diluted with water, followed by wiping with a dry cloth.

Copyright Protection

● With the exception of the user being the copyright holder or when permission such as for duplication has been granted by the copyright holder, permission is required in principle for the duplication, modification, or transmission of copyrighted video and audio data.

Unauthorized duplication, modification, or transmission of copyrighted material may constitute a copyright infringement, and the user may be liable to compensate for any damages. When using copyrighted video/audio data, be sure to check the license agreement of the copyrighted material thoroughly.

When rights or rights holders are involved with regard to the targeted duplicating subject, permission may be required for shooting or using (processing) it. Be sure to check the licensing conditions thoroughly.

Exemption of Liability

● The motion detection feature is not a feature to prevent theft or fire. JVC shall not be liable for any damage that occurs.

● JVC shall not be liable for any damage due to the invasion of privacy by images of this camera.

Others

● The cable stopper of the alarm terminal may come off in some cases. When mounting the cables, make sure to do so carefully.

● If a high luminance object (such as a lamp) is shot, a white smear may appear at the upper and lower ends of this object on the screen. This phenomenon (smear) is characteristic of solid-state image sensors, and is not a malfunction.

● Some hubs/switches of products that are equipped with intelligent features may include a broadcast/multicast suppression function. Viewing of multicast images on this product may fail if this function is enabled.

● Electricity can be supplied to this product either by using the PoE or connecting the AC 24 V power supply. Make sure to select only one mode of electrical supply. Connecting the power cord and the LAN cable for the PoE at the same time may result in failure or malfunction of the camera.
(☞ Page 14, 15)

● This product comes with a built-in AGC circuit. When using this product with AGC set to "Mid", "High" or "Super", the sensitivity level increases when the image is dark, and the screen may appear grainy as a result. However, this is not a malfunction.

● When using this product with the white balance set to "ATW", the displayed color may differ slightly from the actual color according to the condition of the object due to the principle of the automatic tracking white balance circuit. This is not a malfunction.

● The electronic shutter of this product is set to "1/30" by default. For regions with a commercial power supply frequency of 50 Hz, switch to the flickerless mode during use under fluorescent lights (excluding inverter lighting equipment) to prevent flickers.

● When the Easy Day and Night feature is set to "On", the image turns black-and-white in a dark location. As the sensitivity level is increased in this case, the screen may appear grainy and more white spots may appear. When switching between color and black-and-white images, the brighter area on the screen is emphasized, which may reduce the visibility. However, this is not a malfunction.

● If the power supply voltage is momentarily cut off or reduced due to lightning or turning on of the air conditioner's power, the image may be disrupted or noise interference may occur.

● When using multicast, make use of a IGMPv2-compliant network switch.

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Name and Function of Parts

Front / Bottom / Side
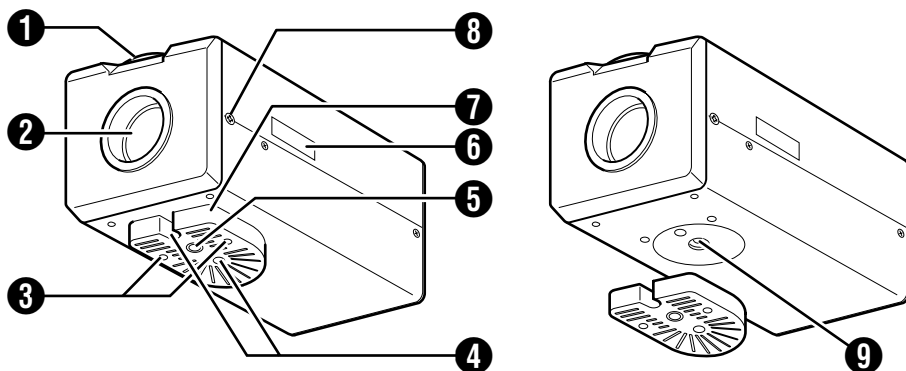
❶ Back Focus Adjustment Ring
This ring is used for back focus adjustment and switching the lens mount method.
To operate, loosen the ❽ back focus fastening screw by turning it in the anti-clockwise direction, and turn the screw in the clockwise direction to fasten after operation is complete.
This product is pre-adjusted to a position that is best suited for CS mount.
(☞ Page 20)

❷ Lens Mount
This is a mount for mounting the lens.
The mount is compatible with CS mount lens and C mount lens.
(☞ Page 13)

❸ Camera Mounting Bracket Fastening Screw (2 pcs: M2.6 x 6 mm)
Use screws with a length of 6 mm. Screws beyond the specified length must not be used as doing so may damage the interior.

❹ Anti-rotation Hole
Use this anti-rotation hole to mount the camera firmly.

❺ Camera Mounting Screw Holes (1/4-20UNC)
Use this hole when mounting this product to a fixer or rotating platform.

Use screws with a length between 5 mm to 7 mm. Screws beyond the specified length may damage the interior, while those shorter than specified may cause the camera to fall off, and therefore these must not be used.
(☞ Page 18)

❻ [MAC address] LED Indicator
The MAC address is a unique physical address of the product. This address cannot be altered.

❼ Camera Mounting Bracket
This bracket is pre-mounted to the bottom surface of the camera. It can also be mounted to the top surface according to the usage. Mount it to the screw holes at the bottom surface using the ❸ camera mounting bracket fastening screws.
(☞ Page 18)

❽ [BF LOCK] Back Focus Fastening Screw
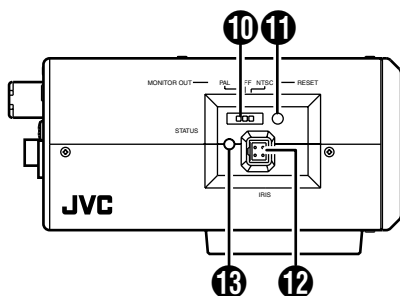This is the fastening screw for the back focus adjustment unit.
(☞ Page 20)

❾ Inner Tripod Base Screw Hole (1/4-20UNC)
Use this hole when mounting this product to a miniature housing.
You can mount to the housing through this hole directly without using the ❼ camera mounting bracket.
(☞ Page 19)

Side / Rear

⑩ [MONITOR OUT] Monitor Output Selection Switch

Use this switch to select the availability of output from the ⑭ [MONITOR OUT] terminal as well as the signal system.

NTSC : Outputs NTSC signals.
OFF : No output. Select this value when distributing images to the network.
PAL : Outputs PAL signals.
[Default setting: OFF]

Caution:
● Images are not distributed to the network when "NTSC" or "PAL" is selected.
● When the switch is changed, press the ⑪ Reset button to reboot the unit.

⑪ [RESET] Reset Button

This is a button for rebooting the camera. Press this button and release within 5 seconds to reboot the camera.
It takes about one minute for the camera to reboot. During startup, the [RESET] button is disabled.

Note:
Pressing the [RESET] button for 5 seconds or longer switches the camera to the service verification mode. Do not press the button for 5 seconds or longer.

⑫ [IRIS] Iris Terminal

Use this terminal to connect the DC iris lens. (Connection with the video iris lens is not possible.)
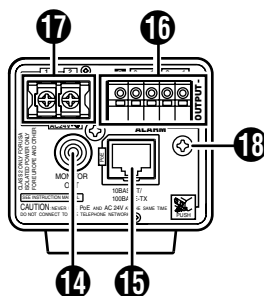(☞ Page 13)

⑬ [STATUS] Status Indicator

This status of this product is indicated in green or orange color.
Starting up: Lights up in orange
Startup complete: Lights up in green
Error: Blinking (orange or green)

Note:
You can adjust the [LED State] settings via the network to turn off the indicator after startup is complete. (☞ Page 65)

⑭ [MONITOR OUT] Monitor Video Signal Output Terminal (RCA)

This is an output terminal for composite video signals (1 V (p-p), output impedance of 75 Ω). Use this terminal to connect to devices such as a video monitor.
This terminal is used for adjusting the camera angle during installation. (☞ Page 16)

Note:
● Use the ⑩ [MONITOR OUT] switch to select the availability of output as well as the signal system. When the switch is changed, press the ⑪ Reset button to reboot the unit.
● When using the [MONITOR OUT] output, set the privacy mask to "Off". (☞ Page 50)

⑮ [10BASE-T/100BASE-TX]

Use this terminal to connect to the network via a LAN cable.
This product supports PoE (IEEE802.3af class 2) and therefore can be used without a power cable. (☞ Page 14)(☞ Page 16)

⑯ [ALARM INPUT/OUTPUT] Alarm Input/ Output Terminals

Use these terminals to connect to an external alarm device.
(☞ Page 17)

⑰ [AC24V] Power Input Terminal

Use this terminal to connect to an AC 24 V, 50/60 Hz power supply.
(☞ Page 15)

⑱ Fall Prevention Wire Mounting Screw (M3 x 6 mm)

Use this screw to mount the fall prevention wire. (☞ Page 18)

Features

### Surveillance Using the Built-in Viewer

VN-V25U comes with a built-in ActiveX JPEG Viewer and MPEG4 Viewer.
JPEG images and MPEG4 images of VN-V25U can be monitored using the computer by installing this built-in viewer on the computer. JPEG images that are currently displayed can also be captured in the computer's hard disk.
"Operation of Built-in Viewer" (☞ Page 73)
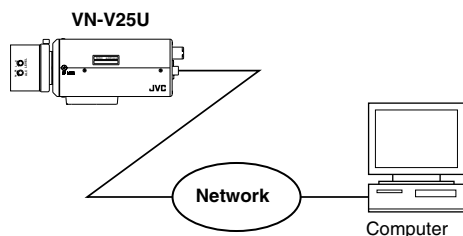

VN-V25U accepts requests from 20 clients at maximum.

Monitoring via Multicast

Multicast enables monitoring of JPEG and MPEG4 images on multiple computers.
"Streaming Page" (☞ Page 58)
"JPEG Viewer Configuration" (☞ Page 78)
"MPEG4 Viewer Configuration" (☞ Page 83)
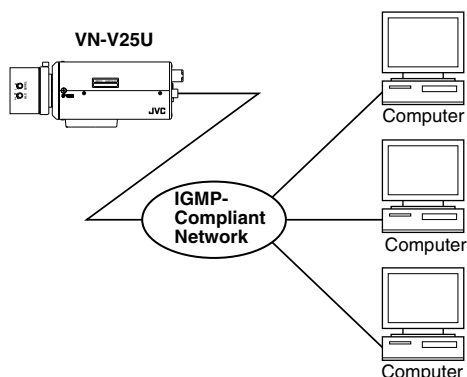
Surveillance via Dual Stream

Simultaneous distribution of JPEG and MPEG4 images enables real-time surveillance using MPEG4 (30 fps) and recording of JPEG images at the same time. You can also lengthen the recording time by lowering the frame rate, resolution, and picture quality settings for JPEG images.

Real-time Surveillance Using MPEG4

Recording JPEG Images
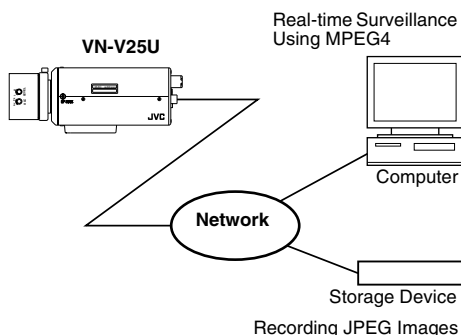
Saving JPEG images to the FTP server at regular intervals

JPEG images may be uploaded to the FTP server at regular intervals.
"FTP" (☞ Page 47)

Uploads the latest JPEG images to the FTP server at regular intervals

11
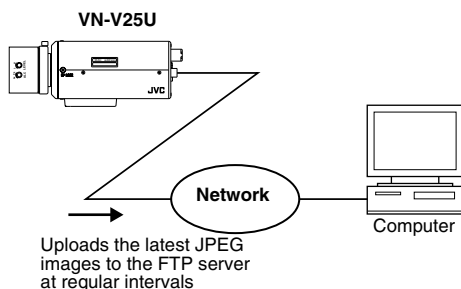
Alarm

VN-V25U comes with a motion detection feature and dual alarm input.
By motion detection or alarm input, actions such as mail delivery, message transmission via TCP/UDP, alarm output can be triggered. These actions can also be triggered by combination of two alarm inputs.
Installing an FTP server enables uploading of JPEG images before and after the alarm input time (pre-/post-recording) to the server.
"Alarm Page" (☞ Page 42)
"JPEG Viewer Configuration" (☞ Page 78)

VN-V25U   Alarm Device

Network

Computer

Sending JPEG images before and after alarm input to FTP
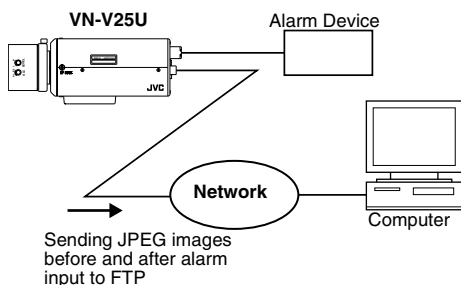
Restrictions on Clients

VN-V25U enables users to authorize or reject the acquisition of images by specific IP address.
(☞ Page 60)

Control via customized application software

The following uses are also possible by developing a customized application software that supports the API of VN-V25U.
For details, please refer to "API Guide" in the supplied CD-ROM.
● Monitors via the computer while at the same time records images to the HDD of the computer.
● Performs recording by changing the frame size/frame rate during alarm occurrence.
● Records the type and time of alarm occurrence on the computer.

Setup Procedures

Step 1 Connection/Installation (☞ Page 14)

Connect the lens mount, power supply cord, LAN cable and alarm.
Next, mount the camera to the ceiling. Remember also to mount the fall prevention wire. After the camera is mounted, connect the video monitor to the [MONITOR OUT] terminal at the rear of the unit, followed by adjusting the camera angle.
You can select the video signals of the [MONITOR OUT] terminal using the [MONITOR OUT] switch. ("NTSC" or "PAL")
(Back focus adjustment ☞ Page 20)
([MONITOR OUT] switch ☞ Page 10)

※ After adjusting the camera angle using the [MONITOR OUT] terminal, set the [MONITOR OUT] switch to "OFF". Images are not distributed to the network when "NTSC" or "PAL" is selected. After changing the [MONITOR OUT] switch setting, press the Reset button to reboot the camera.

▽

Step 2 Network settings (☞ Page 23)

Configure the network settings of the computer and this camera.

※ In a system where multiple units of VN-V25U are used, turn on the power of only one unit to configure the IP address settings using the Internet Explorer. Upon doing so, turn on the power of the second unit and configure accordingly. Configure the settings for the other cameras using the same procedure.

▽

Step 3 Configuring settings using the Internet Explorer (☞ Page 29)

Configure the picture quality and alarm settings using the Internet Explorer.

▽

**Step 4 Operating the built-in viewer (☞ Page 73)**

The built-in viewers enable you to monitor JPEG and MPEG4 images and save JPEG images.

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Mounting the Lens

1. **Check the mounting method of the lens to be used before mounting**

● The default method used for this camera is CS mount. To use a C mount lens, loosen the back focus fastening screw using a screwdriver, followed by turning the back focus adjustment ring using a finger or pointed object (e.g., screwdriver, etc.) to change the mount method.

● Make use of the values listed in the table below for the dimensions of the lens mount (a) indicated in the following diagram.

Lens	Flange Focus (b)	Dimension (a)
C Mount Lens	17.526 mm	10 mm and below
CS Mount Lens	12.5 mm	5.5 mm and below

● Objects longer than the dimension (a) must not be used as doing so may damage the camera interior or prevent the lens from being properly mounted, hence resulting in malfunctions.

Loosen

Back Focus Fastening Screw (M2.6)
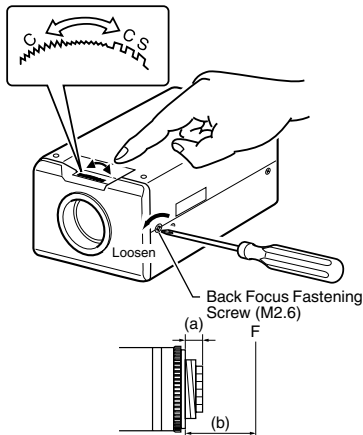
2. **Turn the lens in the clockwise direction to mount it to the camera firmly**

3. **When using a DC iris lens, pay attention to the pin position before connecting the lens cable**
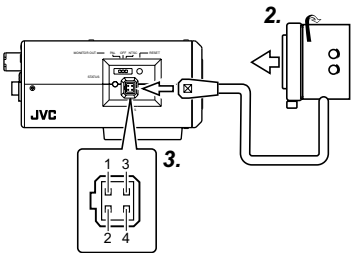
4. Pin Plug
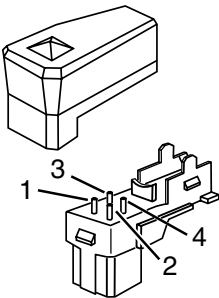
Pin No.	DC Iris Lens (Without Built-in EE Amplifier)
1	Damping (-)
2	Damping (+)
3	Driving (+)
4	Driving (-)

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Power Connection

Electricity can be supplied to this product either by using the PoE or connecting to the AC 24 V power supply.

● When power is supplied to this product, the [STATUS] indicator at the side lights up. The indicator lights up in orange color during startup, and switches to green color after startup is complete.

Caution:
● Make sure to select only one mode of electrical supply. Connecting the power cord and the LAN cable for the PoE at the same time may result in failure or malfunction of the camera.
● Be sure to use an AC 24 V supply that is isolated from the primary power supply circuit. Using a variable voltage power supply will cause the camera and system to malfunction or breakdown.

Using the PoE

Connect to a device that supports PoE to supply electricity from the LAN cable.

Connect to PoE-compatible device
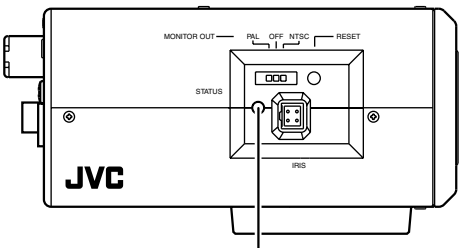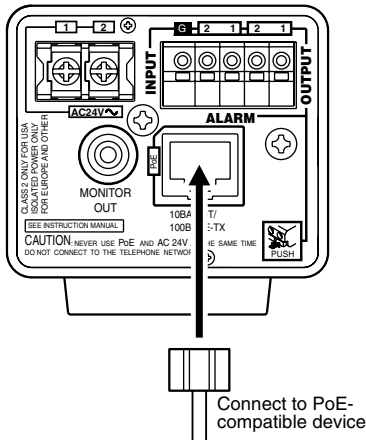
Status Indicator

Note:
● For details on the connection method and cable type, please refer to "LAN Cable Connection" (☞ Page 16).

What is PoE (Power over Ethernet)?
This is a function that enables operation of a LAN equipment without a power cable by supplying power simultaneously with the data using a LAN cable.

Connecting to the AC 24 V power supply

Connect this product to the AC 24 V power supply when the PoE is not used.

Caution:
- Make sure to select only one mode of electrical supply. Connecting the power cord and the LAN cable for the PoE at the same time may result in failure or malfunction of the camera.
- The unit is to be powered by an AC 24 V power supply.
  The AC 24 V power supply should conform to the following: Class 2 only (For USA), Isolated power supply only (For Europe and others).

To Power Supply

Status Indicator
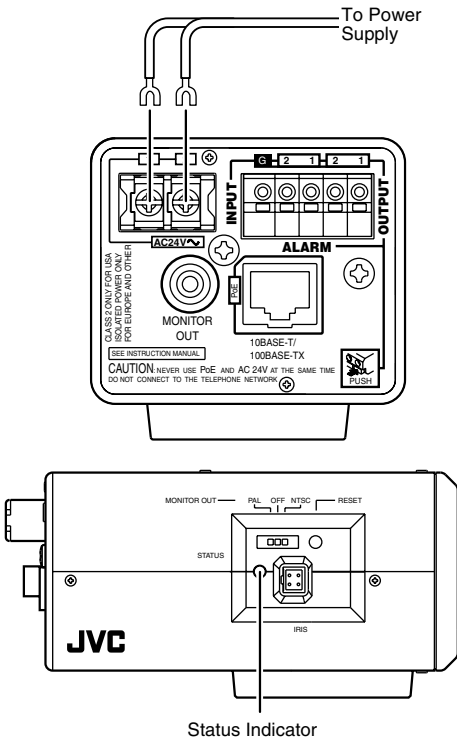
● **Power cord**
- To prevent misconnection and detachment of cords, use a lug plate to connect the cord to the terminal.

- When a two-core VVF (vinyl insulated vinyl sheath cable) is used, the connection distance is as follows. (Reference value)

Maximum Extension (m)	150	400	630
Conductor Diameter (mm)	ø1.0 and above	ø1.6 and above	ø2.0 and above

Warning
The rated power of this product is AC 24 V, 50 Hz/60 Hz. Make sure to use it with the correct voltage. Use an AC 24 V supply that is isolated from the primary power supply. Supplying a power beyond the rated value may result in failures, smoke or fire. When the camera breaks down, turn off the power and contact our service center immediately. When a power beyond the rated value is supplied, the internal components may be damaged even if no abnormality is found on the appearance and operation of the camera. Please contact our service center immediately for servicing (charged separately).

Note:
- After DHCP timeout, all IP addresses of VN-V25Us are set to 192.168.0.2 by default. When the power of multiple cameras within the same LAN environment are turned on at the same time, the IP address of the cameras overlap, thus preventing proper access. As such, make sure to turn on the power of the cameras one by one.
- In a system where multiple units of VN-V25U are used, turn on the power of only one unit to configure the IP address settings using the Internet Explorer. Upon doing so, turn on the power of the second unit and configure accordingly. Configure the camera settings using the same procedure.
- When overlapping of the IP address occurs, check to ensure that there is only one VN-V25U unit within the same LAN environment, and wait for a while (at least 10 minutes) or power off and on all network devices under the same LAN environment. Otherwise, access to VN-V25U may fail.

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LAN Cable Connection

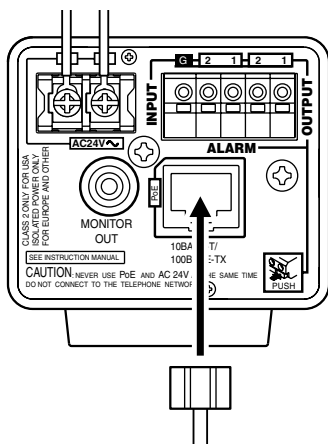Connect the camera to a hub or computer using a LAN cable.

Cable to use
- Shielded cable
- Length of 100 m or shorter

■ **When connecting to a hub**
Make use of a straight cable.

■ **When connecting to a computer**
Make use of a cross cable.

Caution:
- However, cross cables cannot be used with some computer models. When connecting VN-V25U directly to a computer, check the computer's LAN specifications in advance.
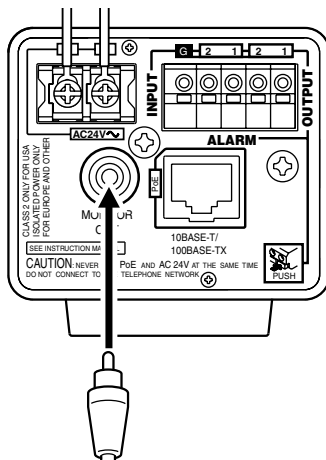
Note:
- Make use of a Category 5 (or higher) cable when 100BASE-TX is used.
- To distribute images to the network, set the [MONITOR OUT] switch at the side of this product to "OFF".

[MONITOR OUT] Switch
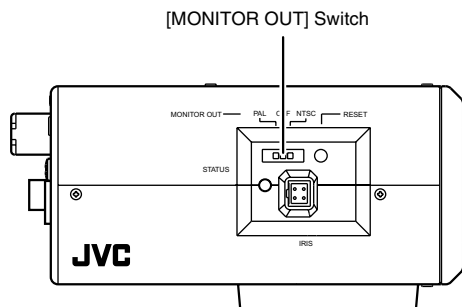
Monitor Signal Output Terminal Connection

This terminal is used for adjusting the camera angle during installation. Connect it to devices such as a video monitor using a video cable (RCA).

Caution:
- A longer cable extension distance causes signals to be attenuated, image resolution to deteriorate and noise to increase.

Note:
- Select the signal system for the monitor output using the [MONITOR OUT] switch at the side of this product. ("NTSC" or "PAL") After adjusting the camera angle, set the switch to "OFF". After changing the switch settings, press the Reset button to reboot the camera.

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Alarm Input/Output Terminal Connection

Connect the alarm input/output terminals with external devices, such as a sensor or buzzer. Plug/Unplug the cable while pressing the button as shown in the diagram below.

Cable to use
- Shielded cable
- Length of 50 m or shorter

Push
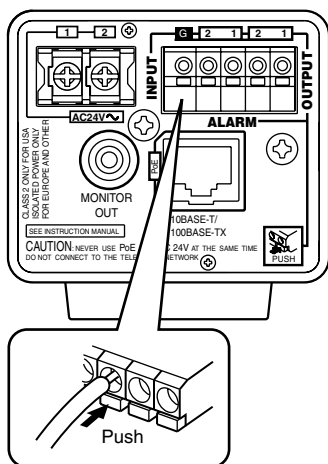
Caution:
- Noises from an external source may cause the camera to malfunction even when the cable used is within 50 m. In this case, move the cable away from the noise source.

Alarm Input Terminal

Connect this terminal to sensor devices, such as an infrared sensor, door sensor, metal sensor or manual switch.

■ Input requirements
- No-voltage relay NPN open collector input
- Polarity of input detection can be selected using a software
- Make/Break (500 ms and above)
- Circuit current at low level: 1 mA
- Applied voltage at high level: 3.3 V

(Alarm Input Equivalent Circuit)
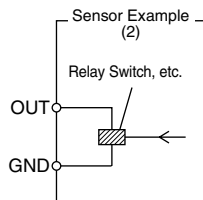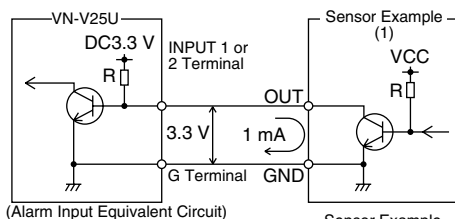
Alarm Output Terminal

Connect this terminal to annunciating devices, such as annunciators, indicators, lights, or buzzers.

■ Output requirements
- Equivalent to NPN open collector output (Set the output logic using the Internet Explorer)
- Allowable applied voltage: DC12 V and below
- Allowable inflow current: 50 mA
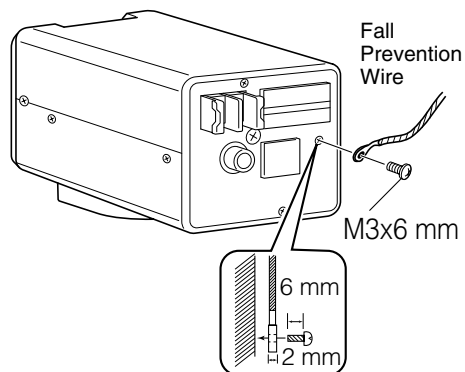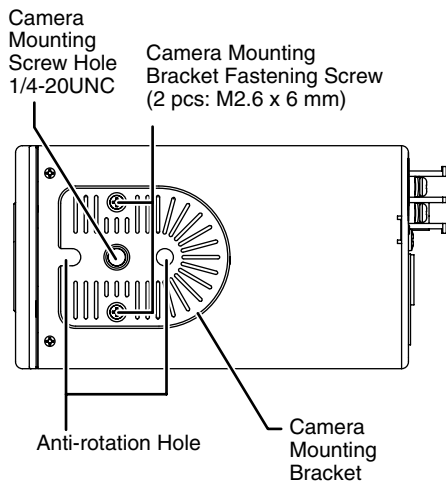- Momentary (100 ms - 5000 ms) output (Set time using the Internet Explorer (☞ Page 46))

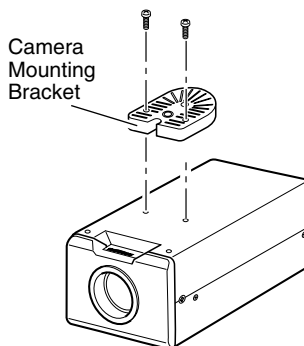(Alarm Output Equivalent Circuit)
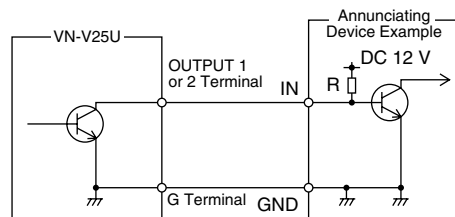
Caution:
- Connect the G terminal of this camera to the GND terminal of the annunciating device or alarm input sensor.

Mounting the Camera

Use the screw hole on the camera mounting bracket to mount this camera to a fixer or rotating platform.

Camera Mounting Screw Hole 1/4-20UNC

Camera Mounting Bracket Fastening Screw (2 pcs: M2.6 x 6 mm)

Anti-rotation Hole

Camera Mounting Bracket

Fall Prevention Wire

M3x6 mm

6 mm

2 mm

■ Mounting the camera mounting bracket on top of the camera

Camera Mounting Bracket

Caution:
- When mounting the camera, use screws with a length between 5 mm to 7 mm from the mounting surface. Screws beyond the specified length may damage the interior, while those shorter than specified may cause the camera to fall off, and therefore these must not be used.

1/4-20UNC

5 mm and above
7 mm and below
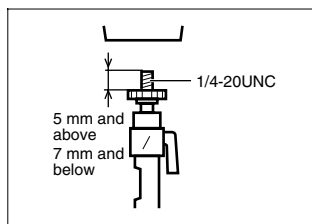
Caution:
- The camera mounting bracket is mounted on the top surface of the camera by default. To mount it to the bottom surface, do so by removing the two fastening screws from the camera mounting bracket. Make sure to fasten the screws firmly.

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Mounting to the Housing Using the Inner Tripod Base

This product comes with an inner tripod base at the bottom surface. You can use the inner tripod base by removing the camera mounting bracket that is attached to the bottom surface. Mount this product to the miniature housing using the screw hole of the inner tripod base.

Inner Tripod Base

Camera Mounting Bracket

Remove the screws for the bracket (2 pcs)
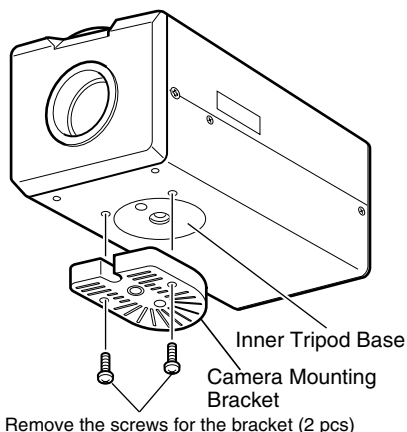
Bottom Surface
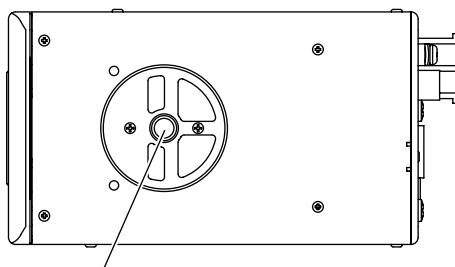
Inner Tripod Base Screw Hole (1/4-20UNC)

Inner Tripod Base Mounting Screws

Make use of 1/4-20UNC screws. The length of the mounting screw shall be between 6 mm to 7 mm from the mounting surface.

Caution:
- Using a screw with a length longer than specified may damage the internal parts of the camera, while using a length shorter than specified may cause the camera to fall off. Use a washer to adjust the length from the mounting surface.

Mounting Plate

Max. 7 mm
Min. 6 mm

Washer
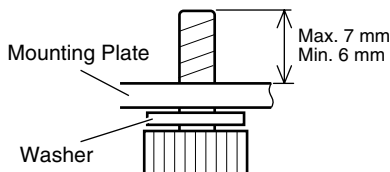
Back Focus Adjustment

The CS mount is adjusted to the widest point of the applicable range by default. When using the zoom lens or C mount lens, or when the lens remains out of focus upon using the focus ring, readjustment is required.

- Follow the method below when necessary to adjust the back focus.
- In order to adjust the back focus accurately, do so according to the steps below upon opening the lens iris using the iris adjustment and ND filter.
  (ND filter is a filter that is used to evenly reduce the amount of light entering the lens at all wavelengths.)
- Connect a video monitor to the [MONITOR OUT] terminal at the rear of the unit, followed by adjusting as follows.

Back Focus Adjustment Ring

Tighten

Loosen

Back Focus Fastening Screw (M2.6)
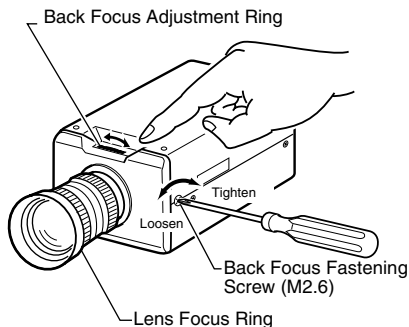
Lens Focus Ring

Fixed focus lens

Adjust when the lens cannot be brought into focus using the focus ring.

1. Loosen the back focus fastening screw by using a Phillips screwdriver and turning it in the anti-clockwise direction

2. Shoot the object or a fine pattern that is farther away than the object

3. Set the focus ring of the lens to ∞

4. Turn the back focus adjustment ring to obtain a sharp focus

5. Tighten the back focus fastening screw by turning it in the clockwise direction, and ensure that it is securely fastened

Zoom lens

Perform the zooming operation (Tele - Wide) and adjust accordingly if it is out of focus.

1. Loosen the back focus fastening screw by using a screwdriver and turning it in the anti-clockwise direction

2. Shoot the object or a fine pattern that is farther away than the object

3. Set the zoom lens to Tele and turn the lens focus ring to adjust the focus

4. Set the zoom lens to Wide and turn the back focus adjustment ring to adjust the focus

5. Repeat Steps 3. and 4. for two to three times

6. Tighten the back focus fastening screw by turning it in the clockwise direction, and ensure that it is securely fastened

Network Requirements

- Ensure that there is sufficient network bandwidth for the data volume to be sent out by VN-V25U. Do not send multicast stream that exceeds the bandwidth. If the entire bandwidth is used by the multicast stream, control of this camera via the network may fail.
- Data volume to be sent by VN-V25U varies with the settings and number of distributions.
- The maximum bit rate for transmission is about 20 Mbps.

Estimation of Total Bit Rate

The total JPEG bit rate from VN-V25U is determined by the VN-V25U settings, number of clients, and the client's requested number of frames. The total MPEG4 bit rate from VN-V25U is determined by the number of distributions. Develop a design upon taking the above into consideration.

Bit Rate of JPEG Stream

The JPEG file size per frame varies with the encoding settings as well as input video signals. The following table may be used as a reference. When VFS is selected, the quantization table during JPEG encoding will be maintained, and the file size will increase/decrease according to the input signals. When AFS is selected, encoding will be performed such that the target file size is the average size of multiple JPEG images.

Picture Quality Control Method		VGA File Size	QVGA File Size
VFS (Variable File Size)	1 (High)	80 KB	27 KB
	2	60 KB	20 KB
	3	40 KB	13 KB
	4 (Medium)	30 KB	10 KB
	5	25 KB	8 KB
	6	20 KB	7 KB
	7 (Low)	15 KB	5 KB
AFS (Average File Size)		Selectable between 10 KB - 100 KB	Selectable between 3 KB - 33 KB

The maximum number of distributions varies with the bit rate settings as well as the client's requested frame rate. Up to 20 streams can be distributed (including multicast). The total frame rate refers to the sum of these frame rates.

For example, when 10 fps is requested by two clients, and in addition, multicast is transmitted at a rate of 10 fps, the total frame rate will be:

10 + 10 + 10 = 30 fps

If the JPEG file size per frame is 30 KB, then the total bit rate will be:

30 KB x 30 fps = 900 KB/s = Approx. 7.2 Mbps

Bit Rate of MPEG4 Stream

You can select either the Variable Bit Rate (VBR) or Constant Bit Rate (CBR) system for MPEG4 stream.
When the VBR system is selected, the bit rate varies according to the condition of the input video signals. The VBR system delivers a stable picture quality, but forecast of the bit rate is difficult.
When the CBR system is selected, encoding is performed at a fixed bit rate regardless of the condition of the input video signals. The picture quality varies under the CBR system, but the bit rate can be easily forecast.
You can specify an estimated bit rate for both VBR and CBR. (64 kbps - 8000 kbps)

Restrictions on the Number of Distributions for VN-V25U

The maximum number of distributions for VN-V25U is determined by the settings as well as requirements from the client.

When only JPEG images are distributed, the maximum number of distributions is determined based on the highest bit rate within the stream. When a distribution request that exceeds the maximum number of distributions is received, this request is denied. For example, if Client A requests for and receives data at 1 Mbps, while Client B requests for and receives data at 5 Mbps, the maximum number of distributions is 4 streams according to the table below.

Maximum number of distributions when only JPEG data is distributed

Distribution at maximum bit rate	Maximum number of distributions	Total maximum bit rate
1 Mbps and below	20	20 Mbps
5 Mbps and below	4	20 Mbps
10 Mbps and below	2	20 Mbps
Larger than 10 Mbps	1	Maximum configurable value (24 Mbps)

When only MPEG4 images are distributed, the maximum number of distributions is determined by the preset bit rate. When a distribution request that exceeds the maximum number of distributions is received, this request is denied.

When distributing only MPEG4 data

Preset bit rate	Maximum number of distributions	Total maximum bit rate
0.6 Mbps and below	20	12 Mbps
3 Mbps and below	4	12 Mbps
6 Mbps and below	2	12 Mbps
Larger than 6 Mbps	1	Maximum configurable value (8 Mbps)

When both JPEG and MPEG4 images are distributed simultaneously, distribution up to two clients for JPEG and MPEG4 respectively is possible. However, distribution requests that exceed a total bit rate of 20 Mbps will be denied.

Total bit rate	Maximum number of distributions for JPEG	Maximum number of distributions for MPEG4
20 Mbps and below	2	2

Insufficient network bandwidth

When there is insufficient bandwidth, the number of JPEG frames (frame rate) that the client can acquire will decrease. Delay will also occur in the distribution of images. In the case of MPEG4, noise interference may occur and playback may fail.

Network Delay

When the client acquires JPEG via TCP, VN-V25U will send out data while checking the ACK from the client at the same time. For networks with considerable delay, data cannot be sent out until ACK is received, and therefore the frame rate will drop. In the case of MPEG4, noise interference may occur and playback may fail.

Decrease in the frame rate due to network delays can be eliminated by receiving data via multicast.

Network Jitter

When there is considerable network jitter, delay time may be prolonged and the image frame rate may drop. In the case of MPEG4, noise interference may occur and playback may fail.

Packet Loss

When acquiring images from VN-V25U via TCP, packet loss may be recovered by TCP transmission. When there is considerable delay in the network, however, missing data may occur and the image frame rate may drop. In the case of MPEG4, noise interference may occur and playback may fail.

When packet loss occurs during multicast sending from VN-V25U, the image frame rate may drop. In the case of MPEG4, noise interference may occur and playback may fail.

List of Protocols and Port Numbers Used by VN-V25U

VN-V25U uses the protocols and port numbers listed below. Ensure that these ports are allowed through the firewall when a firewall is to be installed.

Protocol/Port No.	Purpose of Use
Source	
TCP/80	JPEG/MPEG4 acquisition, Web Settings page, API
TCP/10020 TCP/10021 TCP/10023	(Reserved for adjustment)
Destination	
TCP/20, 21	FTP
TCP/25	Mail delivery
TCP/110	POP (Mail Delivery)
TCP/User Setting No.	Sending alarm
UDP/123	SNTP
UDP/User Setting No.	Sending alarm

IP Address Settings

Setting the IP address for VN-V25U

There are two methods to set the IP address for VN-V25U as follows.

(A) Assigning an IP address to VN-V25U from the DHCP server

(B) Assigning a static IP address to VN-V25U

■ (A) Assigning an IP address from the DHCP server

● VN-V25U is set to "DHCP Enable" (the DHCP client feature is on) by default. To assign an IP address from the DHCP server, connect VN-V25U to LAN with DHCP server, and turn on VN-V25U. Allowing the DHCP server to assign the same IP address to VN-V25U every time eases access to VN-V25U.
● For details on IP addresses assigned to VN-V25U, consult your network administrator.
You can look up the IP address of VN-V25U using the search tool in the supplied CD-ROM.
For details, please refer to "Readme" file in the CD-ROM.

Caution:
● Set the DHCP server such that the same IP address is always assigned to the MAC address of VN-V25U by the DHCP server. Connection may fail if the above setting is not performed.

■ (B) Assigning a static IP address

● System configuration required for setting IP address

The default setting for VN-V25U is "DHCP Enable" (DHCP client feature is turned on). Upon starting up in LAN without DHCP server, VN-V25U starts running with the following IP address after time out of DHCP.

IP address   : 192.168.0.2

Subnet mask   : 255.255.255.0

Default gateway : Nil

Note:
● To set a static IP address for VN-V25U, connect VN-V25U, the switching hub and the computer for setting using a straight LAN cable of Category 5 and above.

● Set up the computer for setting the IP address.

● Minimum computer specifications for setting

OS   : Windows XP (Professional or Home Edition) (SP2)

Web browser : Internet Explorer

                  Version 6.0

Caution:
● When setting the IP address for VN-V25U, do so by using a network that is made up only of VN-V25U, the computer for setting and the switching hub.
● Using a hub connected to other network devices or networks via a LAN cable for setting can cause problems.

IP Address Settings (continued)

● **IP address setting at the computer**

Set the computer to an IP address that enables communication with VN-V25U.

1. Click [Start]
- Select in the sequence of [Control Panel]–[Network Connection]–[Local Area].

2. The computer on which Internet Explorer is launched automatically selects the connected network
- Right-click and select [Properties].
- Check to ensure that the [Client for Microsoft Networks] and [Internet Protocol(TCP/IP)] check boxes are selected.

3. Select [Internet Protocol(TCP/IP)] and click [Properties]

4. Set the IP address
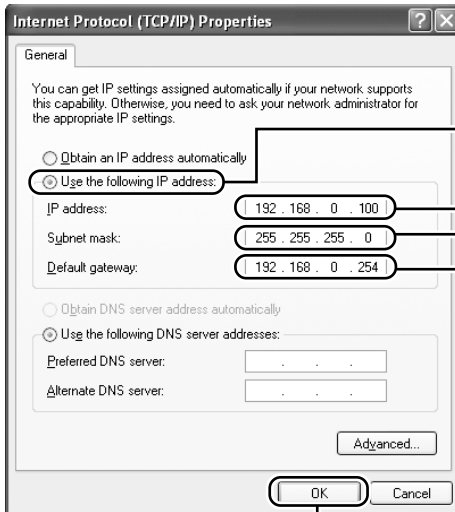
① Select [Use the following IP address].

② Specify the [IP address]. (For example, use 192.168.0.100 when VN-V25U is in its default settings and there is no DHCP server)

Note:
Make sure that you take note of the original IP address before altering.

Caution:
Ensure that a duplicate IP address is not specified within the same network environment.

③ Set [Subnet Mask] to a value that is appropriate for the setting operation. Consult the network administrator if you have any queries. (Use 255.255.255.0 when VN-V25U is in its default settings and there is no DHCP server)

④ When a [Default Gateway] is present, make use of the corresponding IP address (e.g., 192.168.0.254).

⑤ Click [OK].

5. Click [OK] on the "Local Area Connection Properties" screen

● **Changing the IP address using the Internet Explorer**

1. **Launch the Internet Explorer on the computer**

2. **When proxy settings are enabled in the Internet Explorer, follow the steps below to disable the proxy of the Internet Explorer**
- Select in the order of [Tool]–[Internet Options]–[Connections]–[LAN Setting], followed by deselecting the check for [Use a proxy server for your LAN] under [Proxy Server] of the [Local Area Network (LAN) Settings] window.
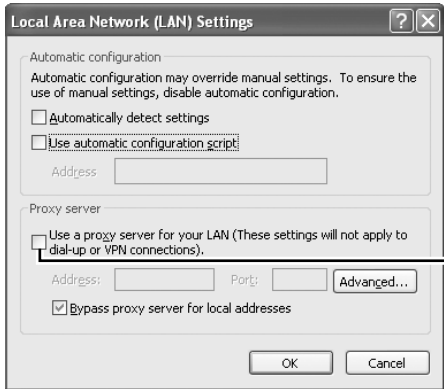
Deselect the check

3. **If the active script of the Internet Explorer is disabled, follow the steps below to enable it**
- Select [Trusted sites] under [Tool]–[Internet Options]–[Security]. Upon doing so, the [Sites…] button directly below becomes active. Click this button and deselect the check in the displayed window, and add the following web site to the zone.

  http://192.168.0.2

- Next, select [Trusted sites] under [Tool]–[Internet Options]–[Security], and press the [Custom Level] button. Select [Enable] under [Scripting]–[Alarm] of the [Security Settings] window that has been opened.
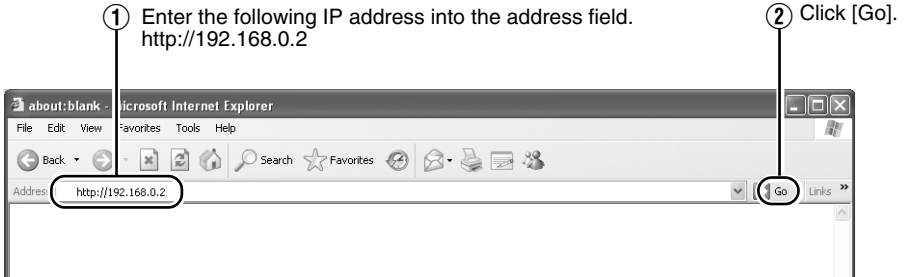
Select [Enable]

25
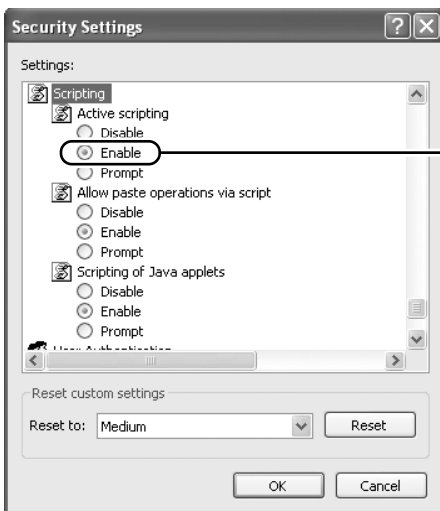
IP Address Settings (continued)

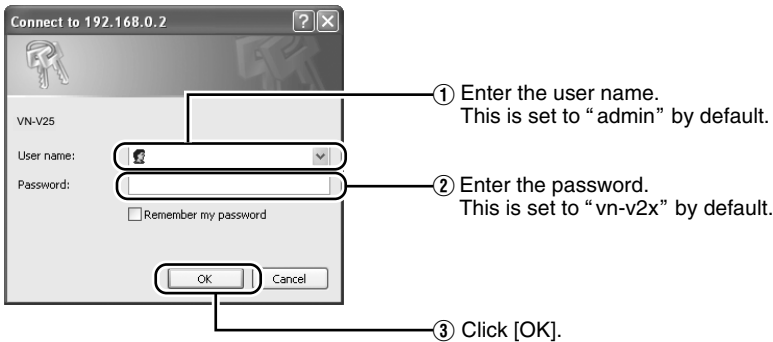● **Changing the IP address using the Internet Explorer (continued)**

4. Launch the Internet Explorer

① Enter the following IP address into the address field.
http://192.168.0.2

② Click [Go].

Note:
● If the proxy server settings for access to the Internet via the Internet Explorer is enabled, you may not be able to specify the IP address directly. In this case, change the proxy settings of the Internet Explorer.
● After the [Security Settings] screen appears, press the [OK] button to proceed.

5. Enter the user name and password (login as administrator)

① Enter the user name.
This is set to "admin" by default.

② Enter the password.
This is set to "vn-v2x" by default.

③ Click [OK].

Note:
● After the [Security Settings] screen appears, press the [Yes] button to proceed.

6. **The top page of VN-V25U appears**

Click on [Network], followed by [Basic] on the next submenu.

7. **The [Basic] page with the IP address settings appears when DHCP is not in use**
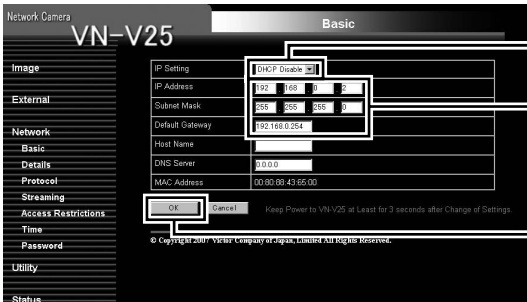
① Set the [IP Setting] item to [DHCP Disable].

② Enter the values you wish to specify in the [IP Address], [Subnet Mask] and [Default Gateway] fields.

③ Click [OK].

A confirmation screen appears. Press the [OK] button. VN-V25U restarts using the new IP address. It takes about one minute for the camera to reboot.

Note:
● Access from this computer may fail when the IP address of VN-V25U is changed. To enable access to VN-V25U from the same computer, alter the IP address at the computer accordingly.

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IP Address Settings (continued)

When the IP address of VN-V25U is known

When the IP address of VN-V25U is known, it can be changed by accessing the built-in web page of VN-V25U via the Internet Explorer on the computer.
Refer to "Setting Using Internet Explorer" (☞ Page 29).

When the IP address of VN-V25U is unknown

IP address settings cannot be changed by accessing via a computer when the IP address of VN-V25U is unknown.
In this case, you can obtain information on the IP address using the following method.

● The supplied CD-ROM comes with a search tool. You can use this tool to search for information on VN-V25U within the LAN. For details on the search tool, please refer to the "Readme" file in the supplied CD-ROM.

Setup

Internet Explorer Setup

1. **Launch the Internet Explorer on the computer**

2. **When proxy settings are enabled in the Internet Explorer, follow the steps below to disable the proxy of the Internet Explorer**
- Select in the order of [Tool]−[Internet Options]−[Connections]−[LAN Setting], followed by deselecting the check for [Use a proxy server for your LAN] in [Proxy Server] of the [Local Area Network (LAN) Settings] window.
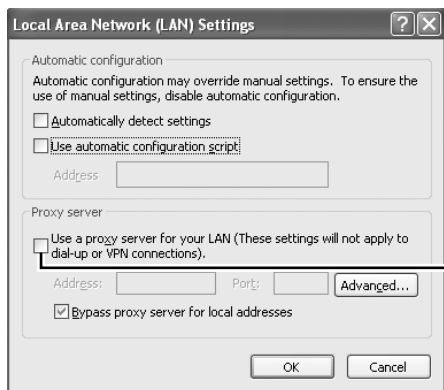

Deselect the check

3. **If ActiveX controls and plug-ins of the Internet Explorer is disabled, follow the steps below to enable it**
- Click [Trusted sites] under [Tool]−[Internet Options]−[Security]. Click on the [Sites…] button directly below, followed by deselecting the check in the displayed window. Add the following web site to the zone.
  http://192.168.0.2
- Click [Trusted sites] under [Tool]−[Internet Options]−[Security]. Select the [Custom Level] button and open the [Security Settings] window. Set all items under [ActiveX controls and plug-ins] in the opened window to [Enable]. Enable also [Allow Script-initiated window without size or position constraints.] under [Miscellaneous].
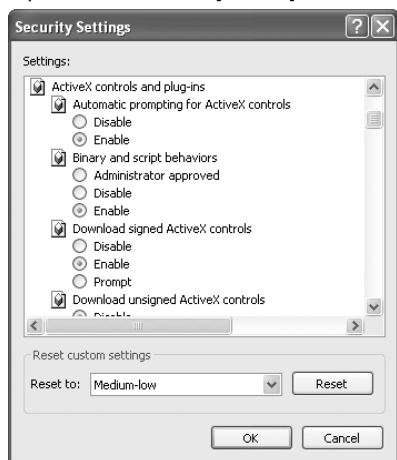
Setup (continued)

Internet Explorer Setup (continued)

4. Disable pop-up block

Connection of VN-V25U cannot be established when pop-up block in the Internet Explorer is set to "Enable".
Follow the steps below to set the pop-up block to "disable".

● Selecting [Tool]-[Pop-up Blocker]-[Turn Off Pop-up Blocker] permits all sites.
● To allow only specific sites such as VN-V25U, select [Tool]-[Pop-up Blocker]-[Turn On Pop-up Blocker], followed by selecting [Tool]-[Pop-up Blocker]-[Pop-up Blocker Settings] that becomes active to open the [Pop-up Blocker Settings] window. In the opened window, add the address of VN-V25U as a permitted web site address.

5. When plug-in tools such as the Yahoo or Google toolbar are included in the Internet Explorer, disable the pop-up block function of these plug-in tools as well

Enter user name and password

User name and password entry will be required at the beginning.
There are three access authorization levels to VN-V25U. The factory settings are as follows.

User Name	Default Password	Description
admin	vn-v2x	All operations and setting changes are allowed
operator	vn-v2x	Change of settings other than those related to network and maintenance are allowed
user	vn-v2x	Viewing of images is allowed

● **Pages that users have access to**

Restrictions are placed on the pages that users have access to. In addition, links on the web pages are also displayed according to the access authority of the user.

● **admin**

Image	[View] [Camera] [Encoding]
External	[Alarm] [Alarm Environment] [Privacy Mask] [Motion Detection]
Network	[Basic] [Details] [Protocol] [Streaming] [Access Restrictions] [Time] [Password]
Utility	[Maintenance] [LED State] [Miscellaneous]
Status	[Operation] [Settings]

● **operator**

Image	[View] [Camera] [Encoding]
External	[Alarm] [Alarm Environment] [Privacy Mask] [Motion Detection]
Network	[Streaming]
Utility	[LED State] [Miscellaneous]
Status	[Operation] [Settings]

● **user**

Image	[View]
Utility	[Miscellaneous]

Note:
● The [Security Settings] screen appears before the top page is displayed. Press the [Yes] button to proceed.
If you do not want this warning screen to be displayed, change the Internet Explorer settings as follows.
  ● Open [Tool]-[Internet Options]-[Security] and select the [Trusted sites] icon.
  ● Next, press the [Custom Level] button, followed by selecting "Enable" for [Miscellaneous]-[Display mixed content].

Caution:
● Do not reset or turn off the power of VN-V25U immediately after the settings are changed. Otherwise, changes may not be saved, and VN-V25U may be restored to the factory settings.

Setting

View Page
This top page is displayed upon access using any of the user names "admin", "operator" or "user".

The camera image is displayed as a still image.
Links to each page are found at the left end. The links displayed vary according to the user name.
For example, in the case of "admin" or "operator", three links, namely [View], [Camera] and [Encoding] are displayed upon clicking [Image]. In the case of "user", only [View] is displayed.

(The diagram below shows the [View] page upon access using "admin" or "operator". The number of links displayed at the left end decreases during access using "user", and [JPEG Viewer] and [MPEG4 Viewer] are not displayed.)

Links to each page

① **Reload Still Image**	Press this button to refresh the displayed still image. Clicking [View] or re-entering the Internet Explorer address will only display the page that is temporarily stored in the Internet Explorer, and still images may not be refreshed. To refresh still images using the above operations, change the Internet Explorer settings as follows. ● Open [Tool]-[Internet Options], click the [Settings] button under Temporary Internet Files, and select "Every visit to the page". **Caution:** ● When a firewall is installed between VN-V25U and the computer, still images may not be displayed on the Image View page of the web browser. For such systems, check the still images using the built-in viewer. The built-in viewer supports NAT/NAPT.	
② **JPEG Viewer**	This is displayed upon access to the [View] page using "admin" or "operator". Click this button to display screens such as the [Security Settings] screen. Press the [OK] or [Yes] button to launch the built-in JPEG viewer. Do not click on the [JPEG Viewer] button over and over again while leaving the warning screen unattended. When this button is pressed for the first time on the operating PC, the built-in JPEG viewer will be installed on the computer. **Note:** ● Refer to "Operation of Built-in Viewer" (☞ Page 73) on procedures to install the built-in viewer on the computer and ways to use the built-in viewer.	
③ **MPEG4 Viewer**	This is displayed upon access to the View page using "admin" or "operator". Click this button to display screens such as the [Security Settings] screen. Press the [OK] or [Yes] button to launch the built-in MPEG4 viewer. Do not click on the [MPEG4 Viewer] button over and over again while leaving the warning screen unattended. When this button is pressed for the first time on the operating PC, the built-in MPEG4 viewer will be installed on the computer. **Note:** ● Refer to "Operation of Built-in Viewer" (☞ Page 73) on procedures to install the built-in viewer on the computer and ways to use the built-in viewer.	

Setting (continued)

Camera Page

This page is for setting the camera's parameters.

This page can be used during access using "admin" or "operator".
● Press the [OK] button to enable the new settings.
● If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.
● To restore the settings of this page to the factory settings, press [Initialize] button.

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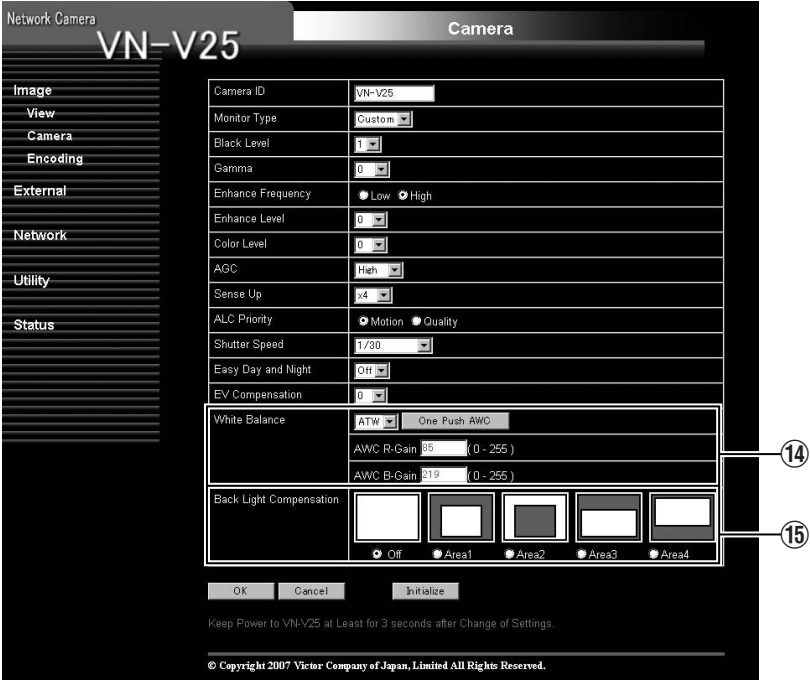| ① **Camera ID**	Character strings entered here will be written to the JPEG comment segment (item name: camera). Refer to the API Guide on the file formats of JPEG.
② **Monitor Type**	For selecting the monitor type according to the monitor used to display the video images. The picture quality varies according to the type of monitor selected.
	Custom : Enables setting of picture quality according to the user's preference.
	LCD1, LCD2 : Picture quality setting for LCD monitors. Two types are available for selection according to the user's preference.
	CRT : Picture quality setting for CRT (cathode-ray tube) monitors.
	[Set values: Custom, LCD1, LCD2, CRT]
③ **Black Level**	For adjusting the black level. Lowering the value darkens the video image. Increasing the value brightens the image.
	[Setting range: 0 ~ 2]
	Note:
	● If the black level is set to "0", this may be too low depending on the monitoring device, or dark area will become complete black.
	● When using MPEG4 images, set to either "1" or "2".
④ **Gamma**	To alter the appearance of dark areas in a video image, adjust the gamma curve.
	Off : Do not perform gamma correction. The entire image appears dull.
	-3 ~ 3 : Perform gamma correction. When this is set to "0", standard gamma correction is performed. Setting to a smaller value darkens the image, while increasing the value brightens the image.
	[Set values: Off, -3 ~ 0 ~ 3]
	Note:
	● The set value is fixed when the monitor type is set to "LCD1", "LCD2", or "CRT".
⑤ **Enhance Frequency**	For setting the type of edge enhancement.
	Low : Enhances both thick and thin edges.
	High : Enhances thin edges.
	[Set values: Low, High]
	Note:
	● The set value is fixed when the monitor type is set to "LCD1", "LCD2", or "CRT".
⑥ **Enhance Level**	For setting the intensity of edge enhancement.
	Larger value : Increases the intensity of edge enhancement.
	Smaller value : Decreases the intensity of edge enhancement.
	[Setting values: -5 ~ 0 ~ 5]
⑦ **Color Level**	For adjusting the color level.
	Larger value : Increases the color level.
	Smaller value : Decreases the color level.
	[Setting values: -5 ~ 0 ~ 5]

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Setting (continued)

### Camera Page (continued)

⑧ **AGC**	For setting the AGC (automatic gain control) level. Off : Disables the AGC feature Mid : When the amount of light is insufficient High : When the amount of light is particularly insufficient Super : When the brightness level is insufficient even upon setting to High. **[Set values: Off, Mid, High, Super]** Note: ● This feature cannot be configured when the [Easy Day and Night] is set to "On". ● The screen appears grainy at dark locations when the AGC feature is in use.
⑨ **Sense Up**	This feature is used to raise the sensitivity level by lengthening the exposure time. You can specify the number of times by which the sensitivity level is to be increased automatically when the object becomes dark. When "x32" is selected, the sensitivity is automatically and continuously increased to 32 times of the level when "Off" is selected. When the sensitivity level increases, the shutter speed slows down, and motion becomes unnatural. When set to "Off", [Sense Up] is disabled. **[Set values: Off, x2, x4, x8, x16, x32, x62]** Note: ● Upon raising the sensitivity level, the screen may appear grainy or white, or white defects may occur. However, this is not a malfunction. ● When [Sense Up] is set to a value other than "Off", flickers occur under the light of fluorescent or mercury lamps. This is not a malfunction of the camera, but is due to principles related to [Sense Up]. ● When the shutter is set to a value between 1/50 to 1/10000, set [Sense Up] to "Off".

⑩ **ALC Priority**	For setting the priority of ALC (feature for maintaining the video level according to the brightness of the object). You can select whether to assign priority to the motion or picture quality when the object becomes dark.
	
	Motion : Assigns priority to motion.
	             When the object becomes dark, priority is given to AGC (automatic gain control), and therefore this is suitable for shooting fast-moving objects.
	
	Quality : Assigns priority to picture quality.
	             When the object becomes dark, priority is given to the [Sense Up] feature, and therefore this is suitable for shooting objects requiring a high picture quality.
	
	[Set values: Motion, Quality]

⑪ **Shutter Speed**	For setting the shutter speed.	
	Auto	: Varies the shutter speed automatically according to the brightness.
	1/30 ~ 1/10000	: Fixed shutter speed.
	Flickerless	: Reduces flickers due to fluorescent lamps.
	[Set values: Auto, 1/30, 1/50, 1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, Flickerless]	
	Note: ● "Auto" is only recommended when using a manual iris lens. ● Flickers may occur when this is set to a value other than "1/50", "1/100", or "Flickerless". When "Flickerless" is selected, flickers may occur when the [Sense Up] feature is used. ● When [Sense Up] is set to a value other than "Off", the shutter speed cannot be set to a value between 1/50 to 1/10000.	
⑫ **Easy Day and Night**	For setting the Easy Day and Night feature (black-and-white mode). When this is set to "On", the image turns black-and-white when the luminance level is low. **[Set values: Off, On]**	
⑬ **EV Compensation**	For setting EV (Exposure Value) correction. Enables setting between -9 (-3EV) ~ 6 (+2EV). You can specify settings in each 1/3 EV step. Decreasing the value darkens the images, while increasing the value brightens the image. **[Set values: -9 ~ 0 ~ 6]**	

Setting (continued)

Camera Page (continued)

⑭ White Balance		For selecting the white balance control feature. White balance can be adjusted for a light source with a color temperature range of 2800K to 9500K.
	ATW	Switches to the Auto-Tracking White Balance (automatic color temperature tracking) mode. Adjusts the white balance automatically according to the color temperature of the light.
	AWC	Switches to the Auto-White Balance Control mode. In the AWC mode, values entered for the [AWC R-GAIN] and [AWC B-GAIN] items are applied to white balance.
	One Push AWC	Executes AWC (automatic white balance control). Execute by placing a white object around the center of the screen in a location with a lighting condition that is similar to the object to be shot. ● Pressing the [One Push] button replaces the [AWC R-GAIN] and [AWC B-GAIN] values with the values of the AWC execution results. ● Even when white balance is set to ATW, pressing the [One Push] button switches the mode automatically to AWC.
	AWC R-GAIN	For setting the gain of R (red) when in the AWC mode. Larger value : Increases the redness. Smaller value : Decreases the redness. **[Set values: 0 ~ 85 ~ 255]**
	AWC B-GAIN	For setting the gain of B (blue) when in the AWC mode Larger value : Increases the blueness. Smaller value : Decreases the blueness. **[Set values: 0 ~ 219 ~ 255]**
⑮ Back Light Compensation		For selecting the backlight compensation feature. Set this feature when there is a bright light source in the same direction as the object. Enables unwanted light sources to be excluded from the photometry area. Off : Disables backlight compensation. Area1 - 4 : For selecting a photometry area from the four available types. **[Set values: Off, Area1, Area2, Area3, Area4]**

Photometry Area — Off

Photometry Area — Area1

Photometry Area — Area2
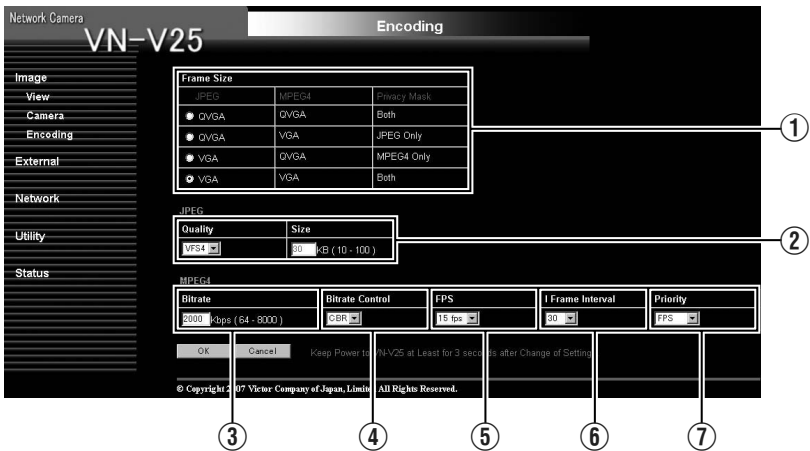
Photometry Area — Area3

Photometry Area — Area4

Setting (continued)

Encoding Page

This page is for setting JPEG and MPEG4 encoding parameters.

This page can be used during access using "admin" or "operator".
● Press the [OK] button to enable the new settings.
● If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.
● When settings on this page are altered during playback using the built-in viewer, reboot the viewer.
● There is a maximum limit to the bit rate for transmission by VN-V25U. If a bit rate that exceeds the maximum limit is specified, this new setting will not be applied. For details on the maximum transmission limit, refer to the section on "Network Requirements" (☞ Page 21).

① **Frame Size**	For setting the frame size of each JPEG or MPEG4 screen to VGA (640 x 480) or QVGA (320 x 240). Select one of the four different patterns.
	Note: ● When the frame size of JPEG is the same as MPEG4, the privacy mask can be displayed on both images. When the frame size of JPEG is different from MPEG4, privacy mask can only be displayed on QVGA images. (☞ Page 50)

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JPEG	
② **Quality/Size**	For specifying the rate control mode and target file size for JPEG. When "VFS1" to "VFS7" is selected, the quantization table during JPEG encoding will be maintained and the file size will increase/decrease according to the input signals. Stipulated values will be displayed in the Size field. When recording JPEG data to a recorder with a limited storage capacity, note that the maximum recording time may vary as the file size fluctuates under this setting. When "AFS" is selected, encoding is performed such that the target file size is the average size of multiple JPEG images. You can enter the target size in the Size field. **[Quality field set values: VFS1 - VFS7, AFS]** **[Size field setting range for VGA: 10kB - 100kB (only when AFS is specified)]** **[Size field setting range for QVGA: 3kB - 33kB (only when AFS is specified)]**
MPEG4	
③ **Bitrate**	For setting the MPEG4 encoding bit rate. The rate control mode is applicable to both CBR and VBR. **[Setting range: 64 kbps - 8000 kbps]**
④ **Bitrate Control**	For selecting whether to set the MPEG4 rate control mode to CBR (Constant Bit Rate) or VBR (Variable Bit Rate). CBR : Encoding is performed at a fixed bit rate regardless of the condition of the input video signals. Enables easy forecast of the bit rate. VBR : Changes the bit rate according to the condition of the input video signals. Picture quality is stable, but forecast of the bit rate is difficult.
⑤ **Frame Rate**	For setting the MPEG4 frame rate. **[Setting range: 1 fps - 30 fps]**
⑥ **I Frame Interval**	For setting the I-frame interval. MPEG4 starts encoding from the I-frame. Shortening the interval stabilizes the picture quality even when there are rapid changes in the video image. However, the picture quality for images with little change will deteriorate. In addition, when multicast packet loss occurs, the time interval required to restore the image is shorter. **[Set values: 30, 60, 90, 120, 150]**
⑦ **Priority**	For selecting whether to assign priority to the frame rate or picture quality during MPEG4 encoding. FPS : Assigns priority to frame rate. Select this setting to enable smooth monitoring of motion images. Quality : Assigns priority to picture quality.

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Setting (continued)

Alarm Page

This page is for setting actions when there is an alarm.
Up to 5 actions (No. 01 - No. 05) may be set.

This page can be used during access using "admin" or "operator".
● Press the [OK] button to enable the new settings. Only items that are valid under the selected action will be saved. When Disable is selected for the action, all settings will be restored to their default values.
● If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.

① ② ③ ④

① **Action**	For specifying the type of action.
	Disable : Does not trigger any action.
	Mail : Sends out e-mail. Specify the recipient's mail address. The title of the mail will appear as [Alarm from VN-V2x] and the sender as [Camera ID]. Enter the message to send in [Mail Text]. Input up to 127 alphanumeric characters. To attach the latest image to the mail, set [Attach Image] to "On".
	FTP : Sends out pre-/post-recorded JPEG files via FTP. See the page on Alarm Environment for details on pre-/post-recording and FTP server settings. (☞ Page 46)
	The maximum transmission rate of FTP is 1 Mbps. If a new FTP trigger occurs during post-recording, the recorded portion is treated as pre-recording and a new post-recording starts. During FTP transmission after completing the post-recording, a new post-recording starts if a new FTP trigger occurs.
	TCP : Sends out the character string entered in the [TCP/UDP Data] field to the destinations specified in [TCP/UDP IP Address] and [TCP/UDP Port Number] via TCP.
	UDP : Sends out the character string entered in the [TCP/UDP Data] field to the destinations specified in [TCP/UDP IP Address] and [TCP/UDP Port Number] via UDP.
	TCP/UDP Data : Input up to 127 alphanumeric characters.
	Output 1 Make : Changes Alarm Output 1 to Make.
	Output 2 Make : Changes Alarm Output 2 to Make.
	Output 1 Break : Changes Alarm Output 1 to Break.
	Output 2 Break : Changes Alarm Output 2 to Break.
	Set the alarm output time in the [Alarm Output Duration] field.
② **1st Trigger**	For specifying the first trigger to be activated. Either alarm input (make), alarm input (break) or motion detection can be selected.
	Note:
	● When the second trigger is turned off, the action will be invoked only by the first trigger.
	● When motion detection is selected as the first trigger, selection of "Max. Interval" and "2nd Trigger" will be disabled.
③ **Max. Interval**	Enabled when both the first and second triggers are specified. Specify the maximum interval between the first and second triggers. An action will be invoked only if the interval between the first and second triggers is within the maximum interval.
④ **2nd Trigger**	For specifying the second trigger for invoking an action. Either alarm input (make) or alarm input (break) can be selected. Unlike the first trigger, motion detection is not available as an option.

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Setting (continued)

Alarm Page (continued)

⑤ **Mail**	Mail Address	: For entering the recipient's mail address.
	Mail Text	: For entering the mail transmission data. Input up to 127 alphanumeric characters.
	Attach Image	: For specifying whether to attach images to the mail.
⑥ **TCP/UDP**	TCP/UDP IP Address	: For entering the address when alarm action notification is to be sent via TCP or UDP. (IP or FQDN)
	TCP/UDP Port Number	: For entering the port number when alarm action notification is to be sent via TCP or UDP. (1 ~ 65535)
	TCP/UDP Data	: For entering the data to send during TCP or UDP notification. Input up to 127 alphanumeric characters.
⑦ **Alarm Output Duration**	For setting the alarm output time from the alarm output terminal. When this is set to "0", it is not possible to revert back to break (or make) after changing to make (or break). **[Setting range: 0, 100 msec ~ 5000 msec]**	
⑧ **Time Filter**	For specifying the alarm action with respect to each day of the week and setting the corresponding time of the day.	
	Applicable day of week	: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday
	Alarm action	
	Unmask Span	: For specifying the time period for invoking the action
	Mask Span	: For specifying the time period to stop the action
	Unmask All	: Activated at all times
	Mask All	: Stopped at all times
	Applicable time period	: For specifying the start and end time in hours and minutes.

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Setting (continued)

Alarm Environment Page

This page is for setting alarm-related environments.

This page can be used during access using "admin" or "operator".
● Press the [OK] button to enable the new settings.
● If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.

① **Mail**	For setting the mail environment when [Mail] is specified as an action on the Alarm page.
	[SMTP] and [POP] can be used. Configure only the [SMTP] settings under usual circumstances.
	Enter the camera's mail address as the recipient's mail address.
	Configure the [POP] settings as well if [POP before SMTP] is enabled. In addition, if FQDN is set for [SMTP Server], configure also the DNS server settings on the Basic page. (☞ Page 55)
	Note:
	What is FQDN (Fully Qualified Domain Name)?
	This is a fully qualified domain name that indicates a notation method of describing the entire host or domain name on the TCP/IP network without abbreviating.
	For example, if the host name is www and the domain name is victor.co.jp, this will be denoted as "www.victor.co.jp" in FQDN.
② **FTP**	For setting the FTP environment when [FTP] is specified as an action on the Alarm page. This is common with the FTP environment when using the periodic FTP on this page.
	When [Directory] is left blank, FTP transfer will be performed to the home directory of the FTP server. To enable FTP transfer to a directory below the home directory, set the corresponding directory name in [Directory].
	Delimit the directory using "/".
	Example: subdir1/subdir2
	Destination directory of FTP transfer will be dependent on the FTP server if "/" is added at the beginning.
	Setting [Periodic FTP] to "On" enables transfer of the latest JPEG images to the FTP server at regular intervals. Specify the interval in seconds for [Periodic FTP Interval].
	File name: Select a type from the two types of periodic FTP file names.
	When "Auto" is selected, images are generated from the year, month, day, hour, minute, second, and number.
	Example: 20071114161032-001-2.jpg
	When "Manual" is selected, you can select a file name generation method from the following.
	● File name containing only the character string entered in [User-defined-name]
	Example: Camera1.jpg
	● File name with the year, month, day, hour, minute, and second added to [User-defined-name]
	Example: Camera1_20071114161032001.jpg
	The name of the file to be transmitted via FTP is made up of the action number, year, month, day, hour, minute, second, number and trigger flag.
	Example: 01-20070711152904-001-0.jpg
	The first two digits are the action number, and the following 14 digits denote the year, month, day, hour, minute and second.
	The three digits after the first hyphen is the number of the series of JPEG files to be sent via the FTP. The number starts from "000". The last digit denotes the trigger flag. This is displayed as "1" only for the JPEG file during a trigger input, and as "0" if otherwise.

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Setting (continued)

Alarm Environment Page (continued)

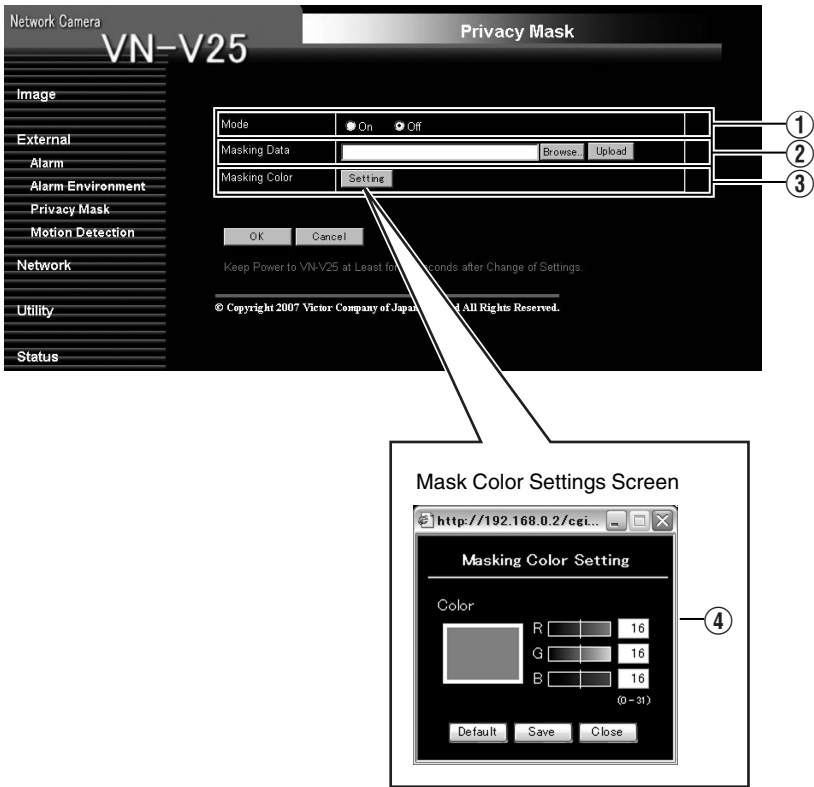|		
② **FTP**		Time Filter:
		For specifying the periodic FTP transfer action with respect to each day of the week and setting the corresponding time of the day.
		Applicable day of week : Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday
		Alarm action
		Unmask Span : For specifying the time period for invoking the action
		Mask Span : For specifying the time period to stop the action
		Unmask All : Activated at all times
		Mask All : Stopped at all times
		Applicable time period : For specifying the start and end time in hours and minutes.
		Pre-/Post-recording parameter:
		[PrePostRecording Frame Rate] : For specifying the JPEG frame rate for FTP pre-/post-recording.
		[PrePostRecording Before Trigger] : For setting the FTP pre-recording trigger time (recording time before alarm input) in seconds.
		[Setting range: 0 ~ 60 seconds]
		[PrePostRecording After Trigger] : For setting the FTP post-recording trigger time (recording time after alarm input) in seconds.
		[Setting range: 0 ~ 60 seconds]
		The maximum time intervals for [PrePostRecording Before Trigger] and [PrePostRecording After Trigger] are determined by the JPEG size on the Encoding page as well as [PrePostRecording Frame Rate]. A message appears if the combination of the entered values are not feasible.
③ **Alarm Output**		For setting the alarm output.
	Duration	For setting the output time of [Manual Output]. [Setting range: 0/100 msec ~ 5000 msec]
	Manual Output	For operating alarm output manually. The current output status appears on the right. When [Duration] is set to "0", pressing the [Make] button switches the alarm to Make output, while pressing the [Break] button switches the alarm to Break output. When [Duration] is set to a value other than "0", pressing the [Make] button switches the alarm to Make output only during the duration of the output, upon which it switches to Break output. When the output duration is set to a value other than "0", pressing the [Break] button switches the alarm to Break output only during the duration of the output, upon which it switches to Make output.

Setting (continued)

Privacy Mask Page

Privacy Mask is a feature that enables masking of a portion of the image.
VN-V25U enables privacy masks to be specified in different shapes. The Privacy Mask masks area by uploading a BMP file painted in red (created separately). The displayed color is determined by the color specified on this page.

This page can be used during access using "admin" or "operator".
● Press the [OK] button to enable the new settings.

Note:

● When using the [MONITOR OUT] output (☞ Page 10, 16), the privacy mask cannot be used.
Set the privacy mask to "Off". After changing the [MONITOR OUT] switch setting, press the Reset button to reboot the camera.
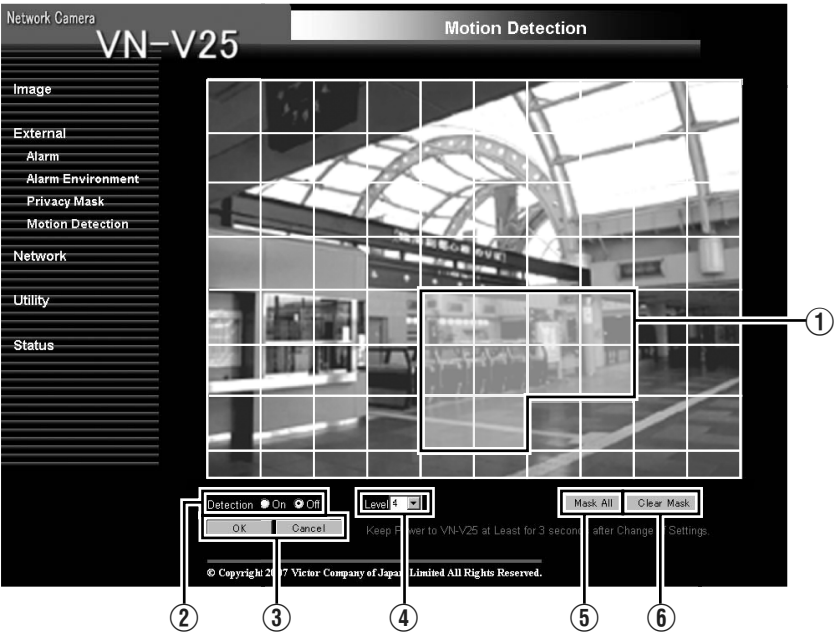

Mask Color Settings Screen

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① **Mode**	For specifying whether to activate the Privacy Mask feature. When this is set to "On", the privacy mask specified using the following items will appear on the image.
	Note:
	● When MPEG4 is set to the same frame size as JPEG, privacy masks are displayed on both images.
	● When MPEG4 is set to a different frame size from JPEG, privacy mask appears only on the QVGA image.
② **Masking Data**	Get ready the BMP file (VGA or QVGA size) for specifying the position and shape of the privacy mask on the computer in advance. (Refer to the following for procedures to create the BMP file.) Press the [Browse...] button to display the file selection screen. Select the BMP file that has been created on this screen. Press the [Upload] button to upload the selected BMP file to VN-V25U.
	Creating the BMP file
	1. Upon installing the camera, use JPEG Viewer to save the JPEG file on the computer. (JPEG Viewer: ☞ Page 77)
	2. Open the saved JPEG file on the computer using the Paint tool, and paint the area to be masked in red ((R, G, B) = (255, 0, 0)).
	3. Save this image as a BMP file (24 bits).
③ **Masking Color**	Press the [Settings] button to display the Masking Color Setting screen. You can alter the color of the privacy mask.
④ **Masking Color Setting**	For specifying the color ratio in the red:green:blue format. Press the [Save] button to set the selected color as the mask color. Press the [Default] button to restore the default mask color settings.

Setting (continued)

Motion Detection Page

This page is for setting motion detection.

● The area valid for motion detection is displayed in blue.
● The area where motion is detected is displayed in red.

① **Display Screen**	The screen is divided into blocks of 10 (horizontal) x 8 (vertical). Use this to set whether to mask each block. All blocks are masked in the default setting. The block turns blue when it is clicked, indicating that it is unmasked. Click again to return to the masked state. Press the [OK] button to enable this setting. Use the [Mask All] button to mask all blocks. Use the [Clear Mask] button to unmask all blocks.
② **Detection**	For setting motion detection to On/Off. Press the [OK] button to enable this setting.
③ **OK/Cancel**	To apply the new parameters, press the [OK] button. Press the [Cancel] button to cancel the change.
④ **Level**	For setting the sensitivity of motion detection. Increasing the number raises the detection sensitivity level, and hence it is more sensitive. Press the [OK] button to enable this setting.
⑤ **Mask All**	Masks all blocks and enables the current motion detection and detection sensitivity settings. Press the [OK] button to enable this setting.
⑥ **Clear Mask**	Unmasks all blocks and enables the current motion detection and detection sensitivity settings. Press the [OK] button to enable this setting.

Note:
- The area display position serves as a reference. Make sure to perform operation check.
- The screen is divided into blocks of 80 (10 horizontal x 8 vertical).
  Set the angle of view such that the size of the object for which motion is to be detected is larger than the size of multiple blocks.

Caution:
- Flickers of fluorescent lamps may cause motion detection.
- Changes in brightness due to the light source may be detected as motion.
- The motion detection feature is not intended to prevent theft or fire. This feature may not function properly depending on the conditions of the object and settings.
  Our company shall not be liable for any accident or damage that occurs.
- When images on VN-V25U are currently acquired by another client, video images may not appear on the [Motion Detection] page due to the maximum distribution limit of VN-V25U. Stop other clients before using the [Motion Detection] page.

Setting (continued)

Basic Page

This page is for performing basic setting related to the network.

This page can be used during access using "admin".
● Press the [OK] button to enable the new settings.
● If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.
● When settings of the Basic page is changed, all services that are currently running will end immediately. For example, when changes are made to the Basic page during JPEG/MPEG4 distribution, distribution will be discontinued and TCP will be disconnected.

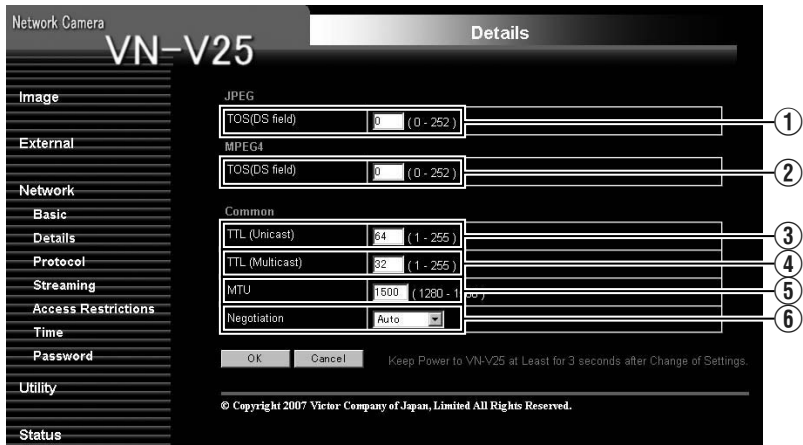| ① **IP Setting**	For setting the DHCP client function. Connect VN-V25U to a network environment with a DHCP server when DHCP is to be enabled. If the DHCP server does not exist when DHCP is set to "Enable", VN-V25U will start running with the 192.168.0.2 IP address and 255.255.255.0 subnet mask in about 2 minutes after startup. Refer to "IP Address Settings" (☞ Page 23) for the IP address.
② **IP Address**	For setting the IP address of VN-V25U.
③ **Subnet Mask**	For setting the subnet mask of VN-V25U.
④ **Default Gateway**	For setting the default gateway of VN-V25U. Set as 0.0.0.0 when a default gateway is not set.
⑤ **Host Name**	For setting the host name of VN-V25U. Specify a name using alphanumeric characters, hyphen (-) or period (.). Underscores (_) cannot be used.
⑥ **DNS Server**	For setting the address of the DNS server.
⑦ **MAC Address**	The MAC address of VN-V25U is displayed in a hexadecimal number.

Setting (continued)

Details Page

This page is for performing detailed network setting.

This page can be used during access using "admin".

● Press the [OK] button to enable the new settings.
● If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.

① **JPEG TOS(DS field)**	For setting the TOS value of IP packets in which JPEG is stored. The upper six bits out of the eight bits that make up the TOS value belong to DSCP. This upper six bits can be set. The lower two bits are "0". For example, upon setting to "255", the lower two bits are converted to "0", and the value becomes "252". TOS values are used in networks that support QoS. By setting QoS for the network switch, routing can be done by giving priority to packets with a larger TOS value.	
② **MPEG4 TOS(DS field)**	For setting the TOS value of IP packets in which MPEG4 is stored. For details, refer to the [JPEG TOS(DS field)] item above.	
③ **TTL Unicast**	For setting the TTL value of JPEG/MPEG4 packets that are to be sent via TCP. The loss of unreceived packets from the network is faster when the TTL value is smaller.	
④ **TTL Multicast**	For setting the TTL value of JPEG/MPEG4 packets that are to be sent via multicast.	
⑤ **MTU**	For setting the maximum packet size for storing JPEG/MPEG4. **[Setting range: 1280 ~ 1500]**	
⑥ **Negotiation**	For setting the negotiation of the network. When a value other than "Auto" is selected, do not set the network device to be connected to "Auto". Ensure that it is set to the same value as VN-V25U.	

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Protocol Page

This page is for changing the HTTP server port number.

This page can be used during access using "admin".
● Press the [OK] button to enable the new settings.
● After changing, you will need to re-establish the connection if you are using the Internet Explorer.

① **HTTP Server Port**	You can change the port number for the built-in web server of VN-V25U. (1 ~ 65535: The default port number setting is 80.) The JPEG and MPEG4 HTTP port number for the web server will also be changed. During access to VN-V25U from the Internet Explorer, enter the following in the Internet Explorer when the camera is in its default settings.
	http://192.168.0.2
	If the port number is changed to 8080, for example, enter the Internet Explorer as follows.
	http://192.168.0.2:8080

Note:
● If the built-in viewer is used for playback, change the HTTP port number in the setting screen of the built-in viewer to the same value.
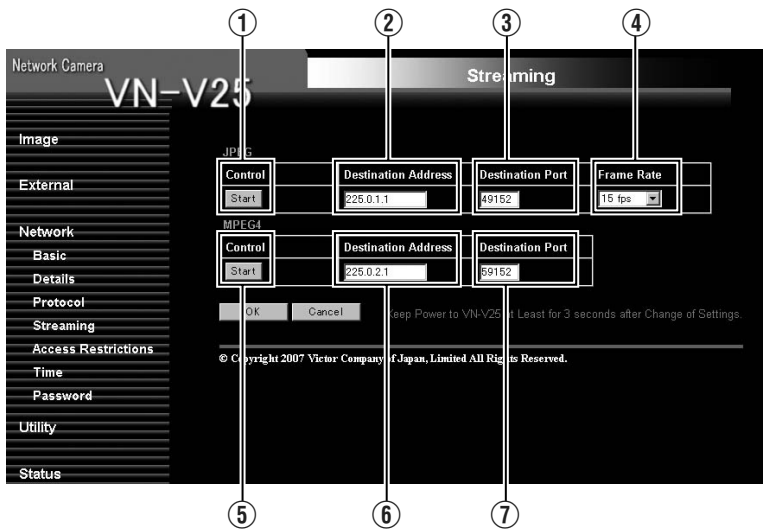
Setting (continued)

Streaming Page

This page is for setting manual multicast transmission.

This page can be used during access using "admin" or "operator".
● Press the [OK] button to enable the new settings.
● If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.

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JPEG	
① **Control**	For starting or stopping streaming of JPEG images. Parameters that are set on the [Streaming] page will be saved when transmission is started upon pressing the [Start] button.
② **Destination Address**	For specifying the destination address of JPEG streaming. Specify the multicast address. When other devices that make use of multicast transmission exist, ensure that each of them is set to a different multicast address.
③ **Destination Port**	For specifying the destination port number of JPEG streaming. Specify an even number for RTP compliance. When other devices that make use of multicast transmission exist, it is recommended that each of them be set to a different port number. Multiple multicast streams cannot be received on a single computer when there are duplicate port numbers.
④ **Frame Rate**	For specifying the frame rate when sending JPEG images via multicast.
MPEG4	
⑤ **Control**	For starting or stopping streaming of MPEG4 images. Parameters that are set on the [Streaming] page will be saved when transmission is started upon pressing the [Start] button.
⑥ **Destination Address**	For specifying the destination address for MPEG4 streaming. Specify the multicast address. When other devices that make use of multicast transmission exist, ensure that each of them is set to a different multicast address.
⑦ **Destination Port**	For specifying the destination port number for MPEG4 streaming. Specify an even number for RTP compliance. When other devices that make use of multicast transmission exist, it is recommended that each of them be set to a different port number. Multiple multicast streams cannot be received on a single computer when there are duplicate port numbers.

Note:
● When the power of VN-V25U shuts down accidentally during multicast transmission, multicast transmission will restart automatically after VN-V25U is rebooted.
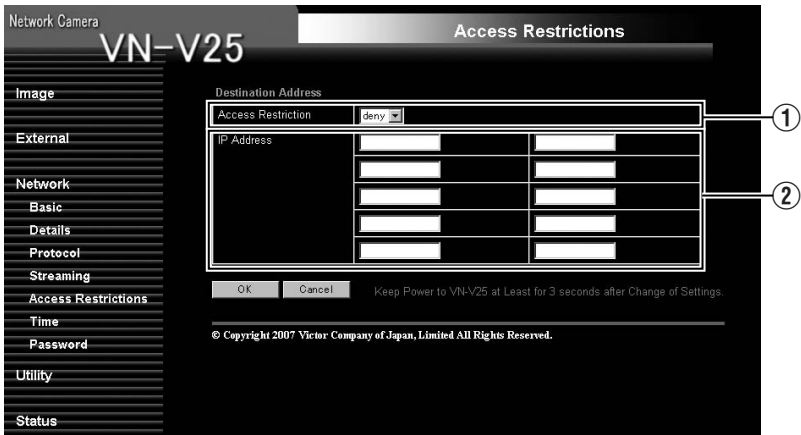
Setting (continued)

Access Restrictions Page

This page is for setting client restrictions.

This page can be used during access using "admin".
● Press the [OK] button to enable the new settings.
● If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.
● This feature is targeted at JPEG/MPEG4 acquisition. It does not impose restrictions on access via a web browser or use of API.

Caution:
● The Access Restriction feature determines whether to impose restrictions during TCP connection by the client. In the case when access restriction is set after TCP connection by a client has been established, TCP connection will not be disconnected.

Destination Address		Restrictions may be imposed on clients accessing VN-V25U using the IP address.
	① **Access Restrictions**	When "deny" is selected, acquisition of JPEG/MPEG4 via the IP address specified for the [IP Address] item will be denied. Restrictions are not imposed on access to the Web Settings page. When "allow" is selected, acquisition of JPEG/MPEG4 via the IP address specified for the [IP Address] item will be permitted. Restrictions are not imposed on access to the Web Settings page.
	② **IP Address**	When a multicast address is specified and "deny" is selected, VN-V25U will deny transmission to this multicast address. When a multicast address is specified and "allow" is selected, VN-V25U will only accept transmission to this multicast address and deny transmission to multicast addresses that are not stated in the [IP Address] field.

Caution:
- Note that when "allow" is selected and all IP address fields are left blank, JPEG/MPEG4 acquisition by all IP addresses will be denied. Restrictions are not imposed on access to the Web Settings page.
  Additionally, VN-V25U will also deny access when instructions for transmission to the specified IP address are sent via API.

Note:
- To specify a specific IP address range, enter a combination of the IP address and subnet mask in the [IP Address] field.
- Define the subnet mask using a length between 8 ~ 30 bits.
  For example, a range between 192.168.0.0 to 192.168.0.255 is denoted as 192.168.0.0/24 ([IP Address]/[bit length of subnet mask]).
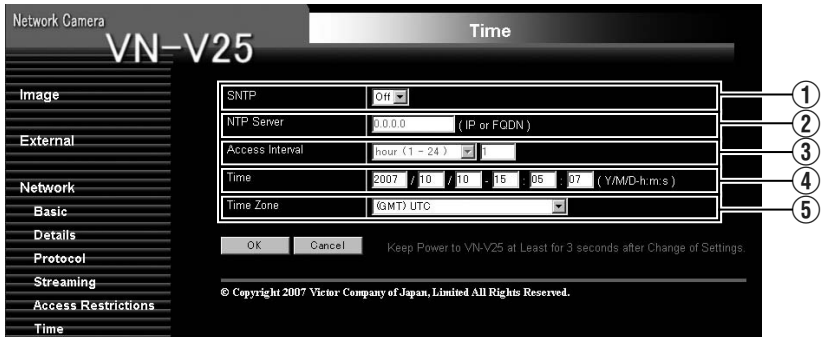
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Setting (continued)

Time Page

This page is for setting time.

This page can be used during access using "admin".
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.

① **SNTP**	For setting the SNTP client feature. When this is set to "On", the system accesses the specified NTP server at regular intervals to acquire the time. In addition, time will be recorded in the JPEG headers distributed by VN-V25U. Discontinuity in JPEG header's time may occur immediately before and after acquiring time from the NTP server.
② **NTP Server**	For setting the IP address of the NTP server.
③ **Access Interval**	For setting the time interval for access to the NTP server.
④ **Time**	Displays the time on the clock of VN-V25U. The clock time can be changed by entering an appropriate value. (Second value cannot be specified.) In addition, time will be recorded in the JPEG headers distributed by VN-V25U. Discontinuity may occur in the JPEG header's time immediately before and after changing the time.
⑤ **Time Zone**	For setting the time zone.

Password Page

This page is for setting the password.

This page can be used during access using "admin".
● Press the [OK] button to enable the new settings.

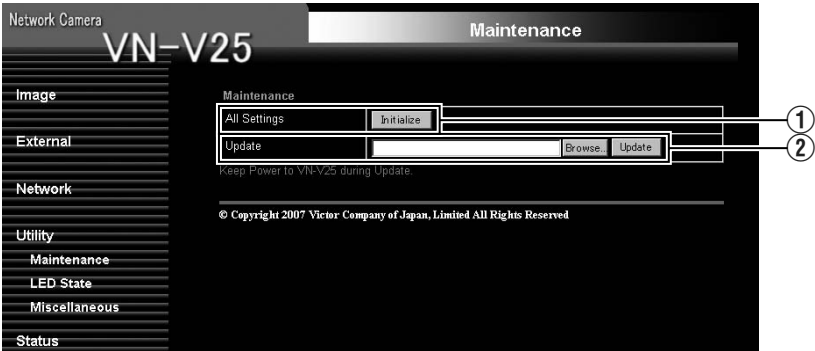| ① **Username**	Select a user name.
② **New Password**	Enter a new password. Passwords shall be at least 4 characters and not longer than 16 characters. VN-V25U is case sensitive.
③ **New Password Again**	Enter again to confirm the new password.

Caution:
● Be sure to handle the password carefully in case you forget it.
● In the event that you forget the password, please consult JVC's servicing center.

Setting (continued)

Maintenance Page

This page is for maintenance purposes.

This page can be used during access using "admin".

① **All Settings** "Initialize"	Restores all settings to their default values and reboots the unit. (It takes about one minute for the camera to initialize and reboot.) Passwords will also be initialized. The built-in clock of VN-V25U will not be affected. JPEG/MPEG4 transmission and all others services that are running will be discontinued.
② **Update**	Upgrades the firmware version of VN-V25U and reboots the unit. The settings of VN-V25U will be saved. Copy the new firmware file to the computer on which Internet Explorer is used, and specify this file using the [Browse...] button. Press the [Update] button to start the update. JPEG/ MPEG4 transmission and all others services that are running will be discontinued. The update process may take several minutes. A message will be displayed on the Internet Explorer when update is successfully completed. **Caution:** ● Do not turn off the power when update is in progress or during reboot after update is complete. Turning off the power of the camera may cause it to malfunction.

LED State Page

This page is for setting the method for lighting the [STATUS] indicator at the side of VN-V25U.

This page can be used during access using "admin" or "operator".
● Press the [OK] button to enable the new settings.

① **LED State**	For selecting whether to light up the [STATUS] indicator of this unit when it is running.
	Enable : Lights up when unit is running.
	Disable : Turns off the indicator after startup is complete.
② **Identify Unit**	If you want the [STATUS] indicator to blink such as during visual check of the camera currently being configured from the computer, set this item to "Blink".
	Note:
	● The light of the indicator remains off if the LED State is set to "Disable".

Setting (continued)

List of Factory Settings of Each Page

■ Camera Page

Item	Factory Settings
Camera ID	VN-V25
Monitor Type	Custom
Black Level	1
Gamma	0
Enhance Frequency	High
Enhance Level	0
Color Level	0
AGC	High
Sense Up	x4
ALC Priority	Motion
Shutter Speed	1/30
Easy Day and Night	Off
EV Compensation	0
White Balance	ATW
Back Light Compensation	Off

■ Encoding Page

Item	Factory Settings
JPEG Frame Size	VGA
MPEG4 Frame Size	VGA
JPEG Quality	VFS4
MPEG4 Bitrate	2000 kbps
MPEG4 Bitrate Control	CBR
MPEG4 FPS	15 fps
MPEG4 I Frame Interval	30
MPEG4 Priority	FPS

■ Alarm Page

Item	Factory Settings
Action	Disable
1st Trigger	Input 1 Make
Max. Interval	—
2nd Trigger	Off
Mail Address	—
Mail Text	—
Attach Image	Off
TCP/UDP IP Address	—
TCP/UDP Port Number	—
TCP/UDP Data	—
Alarm Output Duration	—
Time Filter	Unmask All

■ Alarm Environment Page

Item	Factory Settings
SMTP Server	0.0.0.0
Port Number	25
POP before SMTP	Off
POP Server	0.0.0.0
Port Number	110
Username	—
Password	—
FTP Server	0.0.0.0
Directory	—
Username	—
Password	—
Periodic FTP	Off
Periodic FTP Interval	1
Periodic FTP Naming	Auto
Periodic FTP Time Filter	Unmask All
PrePostRecording Frame Rate	15 fps
PrePostRecording Before Trigger	5 sec
PrePostRecording After Trigger	5 sec
Duration	1000 msec
Manual Output 1	Break
Manual Output 2	Break

List of Factory Settings of Each Page (continued)

■ **Privacy Mask Page**

Item	Factory Settings
Mode	Off
Masking Color Setting	16 (R, G, B)

■ **Motion Detection Page**

Item	Factory Settings
Mask	Mask All
Detection	Off
Level	4

■ **Basic Page**

Item	Factory Settings
IP Setting	DHCP Enable
IP Address	192.168.0.2
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Host Name	—
DNS Server	0.0.0.0

■ **Details Page**

Item	Factory Settings
JPEG TOS	0
MPEG4 TOS	0
TTL TCP	64
TTL Multicast	32
MTU	1500
Negotiation	Auto

■ **Protocol Page**

Item	Factory Settings
HTTP Server Port	80

■ **Streaming Page**

Item	Factory Settings
JPEG Destination Address	225.0.1.1
JPEG Destination Port	49152
JPEG Frame Rate	15 fps
MPEG4 Destination Address	225.0.2.1
MPEG4 Destination Port	59152

■ **Access Restrictions Page**

Item	Factory Settings
Access Restrictions	deny
IP Address	—

■ **Time Page**

Item	Factory Settings
SNTP	Off
NTP Server	0.0.0.0
Access Interval	hour, 1
Time Zone	(GMT) UTC

■ **Password Page**

Item	Factory Settings
Username	"admin"
Current Password	Blank Default passwords are: "admin" : vn-v2x "operator" : vn-v2x "user" : vn-v2x

■ **LED Settings Page**

Item	Factory Settings
LED State	Enable
Identify Unit	On

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Setting (continued)

Miscellaneous Page

This page is for acquiring information.

This page can be used during access using "admin", "operator" and "user".

① **Open Source Software**	Press the [Show] button to display information of the software used by VN-V25U.

Operation Page

Displays the operating status of VN-V25U.

This page can be used during access using "admin" or "operator".
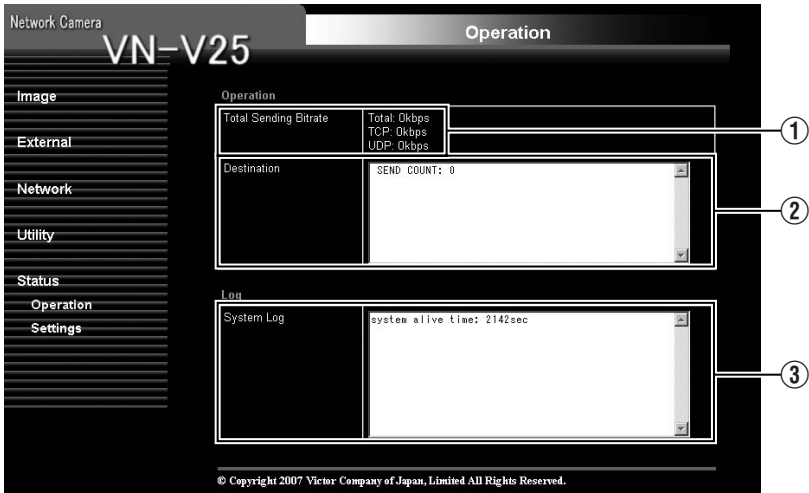
① **Total Sending Bitrate**	Displays the total TCP/UDP bit rate sent by VN-V25U as well as the individual bit rates.
② **Destination**	Displays the destination that VN-V25U is sending data to.
③ **System Log**	Displays the following information. ● Number of seconds after startup ● Alarm information

Setting (continued)

Settings Page

This page displays the version information and settings of VN-V25U.

This page can be used during access using "admin" or "operator".

JPEG	
Quality	VFS4
Size	30 KB

MPEG4	
Bitrate	2000 Kbps
Bitrate Control	CBR
FPS	15 fps
I Frame Interval	30
Priority	FPS

Alarm Setting

No.	Trigger / Action	
01	Trigger	--------
	Action	Off
02	Trigger	--------
	Action	Off
03	Trigger	--------
	Action	Off
04	Trigger	--------
	Action	Off
05	Trigger	--------
	Action	Off

Alarm Environment

Mail	SMTP (SMTP Server: 0.0.0.0) SMTP (Port Number: 25) SMTP (POP before SMTP: Off) POP (POP Server: 0.0.0.0) POP (Port Number: 110) POP (Username:)
FTP	FTP Server: 0.0.0.0 Directory: Username: Periodic FTP: off Periodic FTP Interval: 1 Periodic FTP Naming: Auto PrePostRecording Frame Rate: 15 fps PrePostRecording Before Trigger: 5 sec PrePostRecording After Trigger: 5 sec
Alarm Output	Output1 Duration : 1000 msec Output2 Duration : 1000 msec

Network Basic

IP Address	192.168.0.2
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Host Name	
DNS Server	0.0.0.0
MAC Address	00:80:88:43:65:00

Network Details

JPEG	
TOS(DS field)	0

MPEG4	
TOS(DS field)	0

Setting (continued)

Settings Page (continued)

Common	
TTL (Unicast)	64
TTL (Multicast)	32
MTU	1500
Negotiation	Auto

Protocol

HTTP Server Port	80

Streaming

JPEG	
Status	--------
Address	225.0.1.1
Port	49152
Frame Rate	15

MPEG4	
Status	--------
Address	225.0.2.1
Port	59152

Access Restriction

Access Restriction	deny	
IP Address		

Time

SNTP	SNTP: Off NTP Server: 0.0.0.0 Access Interval: 1 hour
Time / Time Zone	Time: 2007 / 10 / 10 - 17 : 50 : 34 (Y/M/D-h:m:s) Time Zone: (GMT) UTC

LED State

LED State	Enable
Identify Unit	On

Operation of Built-in Viewer

This product comes with a JPEG Viewer and an MPEG4 Viewer. Each of these viewers functions separately.

■ Using the JPEG Viewer enables display of a series of still images as well as one-shot recording of still images.

■ Using the MPEG4 Viewer enables display of MPEG4-encoded motion images.

♦ "Internet Explorer Setup" (☞ Page 74)
♦ "Installing the built-in viewer"
   (☞ Page 76)
♦ "Screen Configuration of JPEG Viewer"
   (☞ Page 77)
♦ "JPEG Viewer Configuration" (☞ Page 78)
♦ "Exiting the JPEG Viewer" (☞ Page 81)
♦ "Screen Configuration of MPEG4 Viewer"
   (☞ Page 82)
♦ "MPEG4 Viewer Configuration" (☞ Page 83)
♦ "Exiting the MPEG4 Viewer" (☞ Page 85)
♦ "Shortcut for Built-in Viewer"
   (☞ Page 86)

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Operation of Built-in Viewer (continued)

Internet Explorer Setup

1. **Launch the Internet Explorer on the computer**

2. **When proxy settings are enabled in the Internet Explorer, follow the steps below to disable the proxy of the Internet Explorer**
- Select in the order of [Tool]-[Internet Options]-[Connections]-[LAN Setting], followed by deselecting the check for "Use a proxy server for your LAN" under [Proxy Server] in the [Local Area Network (LAN) Settings] window.
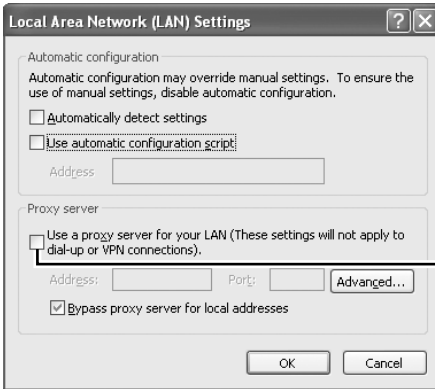
Deselect the check

3. **If ActiveX controls and plug-ins of the Internet Explorer is disabled, follow the steps below to enable it**
- Click [Trusted sites] under [Tool]-[Internet Options]-[Security]. Upon doing so, the [Sites…] button directly below becomes active. Click this button and deselect the check in the displayed window. Next, add the IP address of VN-V25U. If the setting is factory default, add the following web site to the zone.

  http://192.168.0.2

- Click [Trusted sites] under [Tool]-[Internet Options]-[Security]. Select the [Custom Level] button and open the [Security Settings] window. Set all items under [ActiveX controls and plug-ins] in the opened window to [Enable]. Enable also [Allow Script-initiated window without size or position constraints.] under [Miscellaneous].
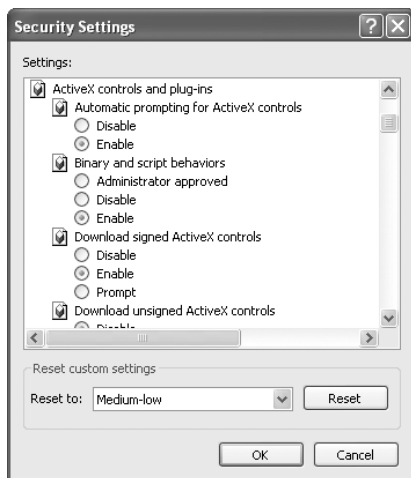
4. **If the pop-up block function of the Internet Explorer is enabled, follow the steps below to disable it**

※ The built-in viewer cannot be used when the pop-up block function is enabled.

- Selecting [Tool]-[Pop-up Blocker]-[Turn Off Pop-up Blocker] permits all sites.
- To allow only specific sites such as VN-V25U, select [Tool]-[Pop-up Blocker]-[Turn On Pop-up Blocker], followed by selecting [Tool]-[Pop-up Blocker]-[Pop-up Blocker Settings] that becomes active to open the [Pop-up Blocker Settings] window. In the opened window, add the address of VN-V25U as a permitted web site address.

5. **When plug-in tools such as the Yahoo or Google toolbar are included in the Internet Explorer, disable the pop-up block function of these plug-in tools as well**

Note:
- To use the built-in MPEG4 Viewer of VN-V25U, install "ffdshow" that is open source codec. You can download "ffdshow" from the Internet.

Operation of Built-in Viewer (continued)

Installing the built-in viewer

1. Enter the URL of the built-in viewer in the address field of Internet Explorer
For example, if the IP address of VN-V25U is 192.168.0.2, enter as follows:

■JPEG Viewer

http://192.168.0.2/cgi-bin/v25viewing.cgi?v25monitor_j.html

■MPEG4 Viewer

http://192.168.0.2/cgi-bin/v25viewing.cgi?v25monitor_m.html

① Enter the URL in the built-in viewer of this camera.
(Refer to the above for the default URL setting.)

Click [Go]

②

2. Enter the user name and password

① Enter the user name.
This is set to "admin" by default.

② Enter the password.
This is set to "vn-v2x" by default.

③ Click [OK].
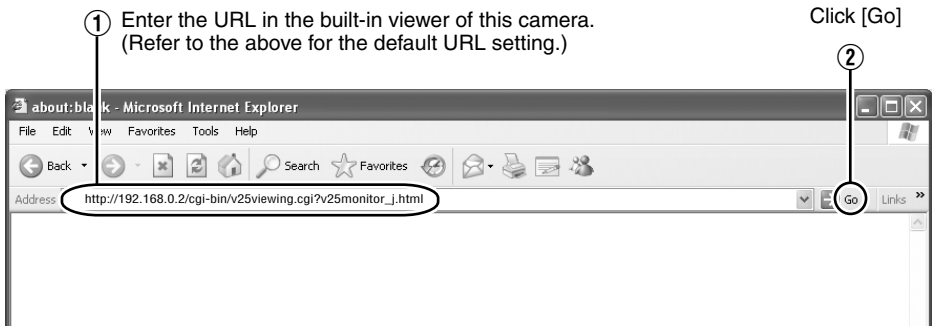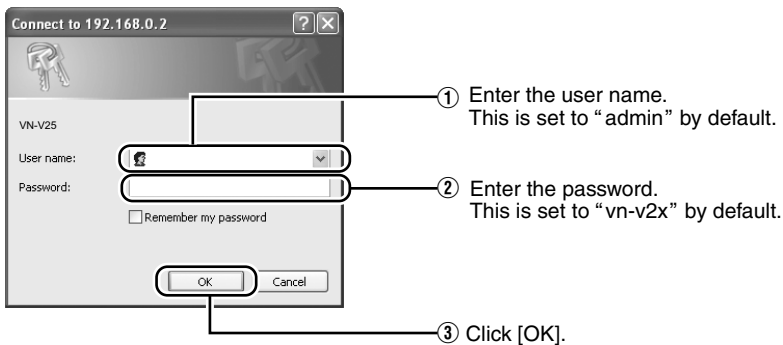
3. The viewer is installed and launched

Screen Configuration of JPEG Viewer

● When the JPEG Viewer is first installed, it is set to play back at 15 fps by default.

① **DisplaySize**	Switches the display size. (VGA or QVGA)
② **Capture**	Captures the currently displayed image on the computer. Images captured will be stored as a JPEG file in the folder created under [My Document] of the computer. The default folder name is "VN-V25". The file name is made up of the year, month, day, hour, minute, second, and millisecond. The time denoted by the file name is based on the time at the computer and not the internal clock of VN-V25U. Motion images cannot be captured.
③ **Pause**	Pauses/Resumes playback of images.
④ **Setup**	Displays the built-in viewer settings window. This setting screen is used to set the built-in viewer as a software on the computer. **Caution:** ● Settings on this setting screen do not affect settings of the VN-V25U unit.

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Operation of Built-in Viewer (continued)

JPEG Viewer Configuration

The viewer setting window appears upon clicking the [Setup] button of the built-in viewer.

① **On Screen Display Settings**		For setting display items on the viewer screen. For the JPEG Viewer, characters are displayed as overlay on the video image.	
	Camera ID	Select "On" to display [Camera ID]. [Camera ID] can be specified on the [Camera] page of VN-V25U. (☞ Page 35)	
	Display MD	Selecting "On" displays the area in which motion is detected in red.	
	Time	Select "On" to display the time. This indicates the time that is stored in the JPEG data.	
	Format	Select the format for displaying time. YYYY, MM, and DD denote year, month and day respectively, while HH, MM, and SS denote hour, minute and second respectively. mm is equivalent to 1/100 seconds.	
② **Stream Settings**		For specifying settings for receiving JPEG stream.	
	Stream	For selecting the protocol when the viewer acquires data from VN-V25U. When "HTTP" is selected, lost packets are recovered via resending. VN-V25U may be monitored using multiple viewers when "Multicast" is selected. When playing back via multicast., start multicast sending on the [Streaming] page of the VN-V25U unit. **Caution:** ● When the built-in viewer is launched with "Multicast" specified, a Windows firewall warning may appear. In this case, select "unblock" and proceed. ● If "block" is selected, the Windows firewall will block the multicast stream and playback of multicast by the viewer will fail.	
	HTTP Port	You can change the HTTP port number. The default port number setting is 80. Specify the same value as the parameter that is set on the Protocol page of VN-V25U. (☞ Page 57)	
	Frame Rate	For selecting the acquisition frame rate of the viewer. Selecting a large frame rate will increase the processing load of the computer on which the viewer is running. **Caution:** ● Set to a rate such that the CPU burden of the computer does not exceed 80 %. When the CPU is overloaded, the computer may not function properly.	

Operation of Built-in Viewer (continued)

JPEG Viewer Configuration (continued)

	Multicast IP Address	You can change the multicast IP address. The default IP address setting is 225.0.1.1.
	Multicast Port	You can change the multicast port number. The default port number setting is 49152. This is enabled when "Start" is selected for the [JPEG Control] item on the [Streaming] page. Specify the same value as the parameter that is set on the [Streaming] page of VN-V25U. (☞ Page 59)
③ **Folder Name**		For specifying the name of the folder in which the captured files are stored. (When the viewer is installed: VN-V25)
④ **OK**		Saves the changed settings. Click the [OK] button to enable the new settings and restart the built-in viewer after closing the setting window.
⑤ **Cancel**		Cancels the changed settings and closes the setting screen.

Note:
● The settings of the built-in viewer are stored in the file named Cookie.

This setting screen is used to set the built-in viewer as a software on the computer, and does not apply to settings of the VN-V25U unit.
When settings are changed, press the [OK] button to exit and restart the viewer.

Note:
Searching and deleting cookie files
● Open [Tool]−[Internet Options]−[Advanced] of the Internet Explorer, and press the [Settings] button under [Temporary Internet Files]. A new [Settings] will appear. Press the [View Files] button in this window. The [Temporary Internet Files] window opens up and a list of files will be displayed. The file named "cgi-bin" in this list is the Cookie for the built-in viewer.
● Deleting this file deletes the view settings, and the viewer will be initialized during the next startup.

Exiting the JPEG Viewer

To exit, press the [close] button at the top right of the window.

Click [close].

● During the next startup of the built-in viewer, launch the Internet Explorer and enter the URL of the built-in viewer in the address field.
For example, if the IP address of VN-V25U is 192.168.0.2, enter as follows:

http://192.168.0.2/cgi-bin/v25viewing.cgi?v25monitor_j.html

● After the [Security Settings] screen appears, press the [OK] button to proceed.

## Operation of Built-in Viewer (continued)

Screen Configuration of MPEG4 Viewer

① **DisplaySize**	Switches the display size. (VGA or QVGA)
② **Pause**	Pauses/Resumes playback of motion images.
③ **Setup**	Displays the built-in viewer settings window. This setting screen is used to set the built-in viewer as a software on the computer. **Caution:** ● Settings on this setting screen do not affect settings of the VN-V25U unit.

Note:
● To use the built-in MPEG4 Viewer of VN-V25U, install "ffdshow" that is open source codec. You can download "ffdshow" from the Internet.

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MPEG4 Viewer Configuration

The MPEG4 Viewer's settings window appears upon clicking the [Setup] button of the viewer.
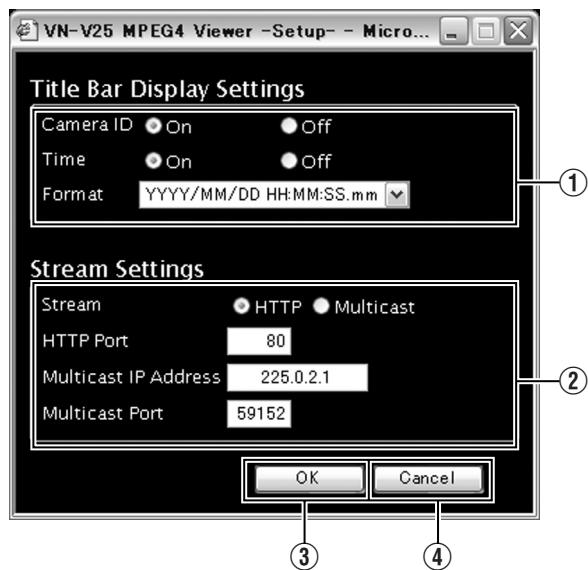
① **Title Bar Display Settings**		For setting display items on the viewer screen. For the MPEG4 Viewer, characters are displayed in the title bar of the window.
	Camera ID	Select "On" to display [Camera ID]. [Camera ID] can be specified on the [Camera] page of VN-V25U. (☞ Page 35)
	Time	Select "On" to display the time.
	Format	Select the format for displaying time. YYYY, MM, and DD denote year, month and day respectively, while HH, MM, and SS denote hour, minute and second respectively. mm is equivalent to 1/100 seconds.

Operation of Built-in Viewer (continued)

MPEG4 Viewer Configuration (continued)

② **Stream Settings**		For specifying settings for receiving MPEG4 stream.
	Stream	For selecting the protocol when the viewer acquires data from VN-V25U. When "HTTP" is selected, lost packets are recovered via resending. VN-V25U may be monitored using multiple viewers when "Multicast" is selected. When playing back via multicast., start multicast sending on the [Streaming] page of the VN-V25U unit. **Caution:** ● When the built-in viewer is launched with "Multicast" specified, a Windows firewall warning may appear. In this case, select "unblock" and proceed. ● If "block" is selected, the Windows firewall will block the multicast stream and playback of multicast by the viewer will fail.
	HTTP Port	You can change the HTTP port number. The default port number setting is 80. Specify the same value as the parameter that is set on the [Protocol] page of VN-V25U. (☞ Page 57)
	Multicast IP Address	You can change the multicast IP address. The default address is 225.0.2.1.
	Multicast Port	You can change the multicast port number. The default port number setting is 59152. This is enabled when "Start" is selected for the [MPEG4 Control] item on the [Streaming] page. Specify the same value as the parameter that is set on the [Streaming] page of VN-V25U. (☞ Page 59)
③ **OK**		Saves the changed settings. Click the [OK] button to enable the new settings and restart the built-in viewer after closing the setting window.
④ **Cancel**		Cancels the changed settings and closes the setting screen.

Note:
● To use the built-in MPEG4 Viewer of VN-V25U, install "ffdshow" that is open source codec. You can download "ffdshow" from the Internet.

Note:
● The settings of the built-in viewer are stored in the file named Cookie.

This setting screen is used to set the built-in viewer as a software on the computer, and does not apply to settings of the VN-V25U unit.
When settings are changed, press the [OK] button to exit and restart the viewer.

● Deleting this file deletes the view settings, and the viewer will be initialized during the

Note:
Searching and deleting cookie files
● Open [Tool]−[Internet Options]−[Advanced] of the Internet Explorer, and press the [Settings] button under [Temporary Internet Files]. A new [Settings] will appear. Press the [View Files] button in this window. The [Temporary Internet Files] window opens up and a list of files will be displayed. The file named "cgi-bin" in this list is the Cookie for the built-in viewer.
next startup.

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Exiting the MPEG4 Viewer

To exit, press the [close] button at the top right of the window.

Click [close].

● During the next startup of the built-in viewer, launch the Internet Explorer and enter the URL of the built-in viewer in the address field.
For example, if the IP address of VN-V25U is 192.168.0.2, enter as follows:

http://192.168.0.2/cgi-bin/v25viewing.cgi?v25monitor_m.html

● After the [Security Settings] screen appears, press the [OK] button to proceed.

Operation of Built-in Viewer (continued)

Shortcut for Built-in Viewer

Creating a shortcut for the built-in viewer on the Desktop screen of the computer saves you the trouble of having to enter the URL in the Internet Explorer.
Create the shortcut by following the procedure below.

1. Launch the Internet Explorer

2. Right-click at an arbitrary point on the Internet Explorer screen and select [Create Shortcut]
Click the [OK] button on the confirmation screen and a shortcut will be created on the Desktop screen.

3. Right-click on the shortcut icon on the Desktop screen and select Properties
The setting screen appears.

4. Enter the URL of the built-in viewer in the URL field
For example, if the IP address of VN-V25U is 192.168.0.2, enter as follows:

■JPEG Viewer

http://192.168.0.2/cgi-bin/ v25viewing.cgi?v25monitor_j.html

■MPEG4 Viewer

http://192.168.0.2/cgi-bin/ v25viewing.cgi?v25monitor_m.html

5. Click the [OK] button to end
Clicking on the shortcut created saves you the trouble of having to enter the URL in the Internet Explorer.

Note:
● Before starting up the built-in viewer using the shortcut, close all Internet Explorer windows. Starting up the built-in viewer using the shortcut while leaving other Internet Explorer windows opened may result in malfunction of the built-in viewer.

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Troubleshooting

Symptom	Causes and Countermeasures	Reference Page
IP address of VN-V25U is unknown	• DHCP is "Enable" in default settings. IP address will be provided from DHCP server. • If there is no DHCP server, VN-V25U will start using default IP address, 192.168.0.2, and default subnet mask, 255.255.255.0. • Search tool in attached CD-ROM is available to find VN-V25U from a PC in the same LAN.	☞ Page 28
The web page of VN-V25U cannot be displayed	Check the Internet Explorer settings. When a proxy server is in use, configure the proxy server settings of the Internet Explorer accordingly.	☞ Page 29
The built-in viewer cannot be installed	Check the Internet Explorer settings. The built-in viewer consists of a software component called ActiveX. The ActiveX is usually installed when the built-in viewer is used for the first time. However, installation may be rejected depending on the Anti-virus software settings. In this case, change the settings of the Anti-virus software before installing the built-in viewer.	☞ Page 74
Authentication by Verisign appears during installation of the built-in viewer	Verisign's electronic signature is stored in the built-in viewer. For computers with a network environment that is connected to the Internet, the authenticity of the viewer can be verified via authentication by Verisign.	—
A warning message appears upon starting up the built-in viewer	The built-in viewer consists of a software component called ActiveX. The ActiveX is usually installed when the built-in viewer is used for the first time. However, installation may be rejected depending on the Anti-virus software settings. In this case, change the settings of the Anti-virus software before installing the built-in viewer.	—
TCP images cannot be played back	The maximum number of images that can be sent by VN-V25U via TCP is 20, and up to 20 built-in viewers can be connected to each VN-V25U unit. Make use of multicast for monitoring when the number of areas exceeds the above number. VN-V25U allows multicast transmission of JPEG and MPEG4 one stream at a time.	☞ Page 21

Troubleshooting (continued)

Symptom	Causes and Countermeasures	Reference Page
Multicast images cannot be played back	● Start multicast transmission manually from the [Streaming] page of VN-V25U. ● In the case of multicast reception at the built-in viewer, check that the multicast address and port number of the built-in viewer settings coincide with those on the [Streaming] page of VN-V25U. Make use of a network that supports IGMPv2 for multicast transmission. ● Multicast may be blocked by the WindowsXP firewall. When this occurs, perform the following to allow it to pass through. Double-click [Windows Firewall] under [Start]−[Control Panel], click the [Add Port…] button under the Exception tab, and register the port number to be allowed through the firewall in the Port Number field. Enter an arbitrary character string in the name field.	☞ Page 58 ☞ Page 78 ☞ Page 83
The frame rate of the displayed image is low	● Check the built-in viewer settings when a built-in viewer is in use. ● Frame rate will be constrained when the network bandwidth is narrow.	☞ Page 78 ☞ Page 83
A white zone appears in the built-in viewer	● For some computers, a part of the Internet Explorer graphics may not appear and is left white when the following setting is performed on the Internet Explorer. If [Right-click on the Desktop screen]−[Properties]−[Settings]−[Advanced]−[Advanced]−[DPI setting] is set to "Large size" or "Custom size", select "Normal size" to resume normal drawing.	—
Unable to receive alarm notification using the computer via TCP/UDP	● Data may be blocked by the WindowsXP firewall. When this occurs, perform the following to allow it to pass through. Double-click [Windows Firewall] under [Start]−[Control Panel], click the [Add Port…] button under the Exception tab, and register the port number to be allowed through the firewall in the Port Number field. Enter an arbitrary character string in the name field.	—
Images are not distributed to the network	● Check whether the [MONITOR OUT] switch at the side of VN-V25U is set to "NTSC" or "PAL". If either of the above is selected, change the [MONITOR OUT] switch setting to "OFF". After changing the switch settings, press the [RESET] button to reboot.	☞ Page 10

Symptom	Causes and Countermeasures	Reference Page
The MPEG4 Viewer screen appears in black	When DirectX 9.x or Windows Media Player 9.x is installed on the computer, the video image screen appears in black. [Countermeasure] To make use of the built-in MPEG4 Viewer of VN-V25U, install "ffdshow" that is open source codec. You can download "ffdshow" from the Internet.	—
No MONITOR OUT image output	● Set the [MONITOR OUT] switch to "NTSC" or "PAL", and press the Reset button. ● When using the [MONITOR OUT] output, set the privacy mask to "Off".	☞ Page 10 ☞ Page 50
Zonal noise occurs at the bottom of the MONITOR OUT image	When using the [MONITOR OUT] output, set the privacy mask to "Off".	☞ Page 50
Images from the network are distorted	Set the [MONITOR OUT] switch to "OFF", and press the Reset button.	☞ Page 16

Specifications

Camera Unit

Pick-up element : 1/4-inch progressive scan CCD

Effective pixels : Approx. 330,000 pixels 659 (H) $\times$ 494 (V)

Lens Mount : C/CS mount

[Monitor Output]

Composite video x 1 (75 Ω, 1 Vp-p)

Minimum object illumination:

: 1.0 lx (50 %, F1.2, AGC Super)

: 0.5 lx (25 %, F1.2, AGC Super)

: 0.8 lx (50 %, F1.2, Easy Day and Night ON)

: 0.4 lx (25 %, F1.2, Easy Day and Night ON)

Video S/N ratio : 50 dB (Typ., 50 %, AGC OFF, Enhance -5)

[Network Output]

Image compression format

: JPEG, MPEG4

Frame size : 640$\times$480, 320$\times$240

Horizontal resolution

: 400 TV lines (typ.)

Network interface

: RJ-45 100BASE-TX/10BASE-T/ FULL/HALF/Auto negotiation supported

LAN Specifications

Compliant with IEEE802.3, IEEE802.3u and IEEE802.3af

Communication protocol

: TCP/IP, UDP, HTTP, FTP, ICMP, ARP, RTP, DHCP, SNTP, SMTP, IGMP

General

Alarm input : No-voltage a contact input, NPN open collector input, low level, latch/momentary (500 ms and above) (Circuit current during low level: 1 mA; Applied voltage during high level: DC 3.3 V)

Alarm output : NPN open collector output (Allowable applied voltage: DC 12 V; Allowable inflow current: 50 mA)

Internal memory : 8 MB

Supply voltage : AC 24 V 50 Hz/60 Hz or PoE (DC -48 V)

Current consumption

: AC 24 V 0.35 A PoE 115 mA (5.5 W)

Ambient temperature

: -10 °C ~ 50 °C (operation)

0 °C ~ 40 °C (Recommended)

Ambient humidity

: 20 % RH $\sim$ 85 % RH (without condensation)

Mass : 480g (16.93 oz)

Accessories/Attachments

: Startup Guide 1

CD-ROM 1

Warranty Card (For USA)....... 1

Service Information Card (For USA) 1

Dimension [Unit: mm]
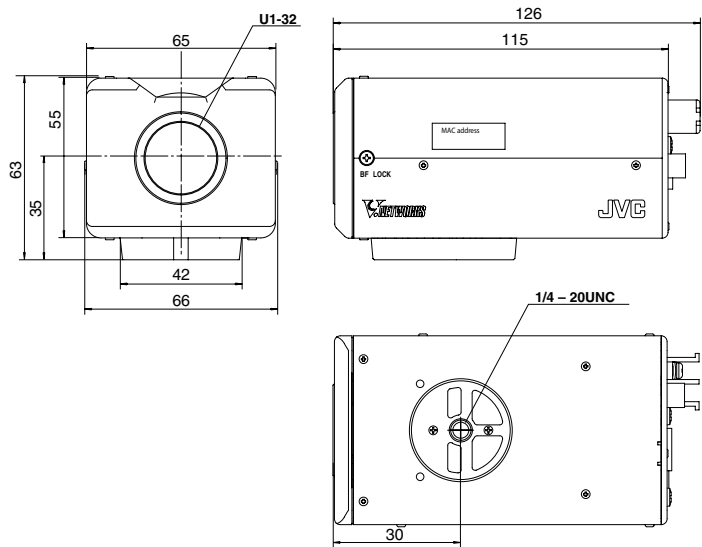
※ Specifications and appearance of this product are subject to changes for improvement without prior notice.

JVC

LST0650-001A